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     (FILE 'HOME' ENTERED AT 10:57:15 ON 12 MAY 2006)

     FILE 'MEDLINE, EMBASE, BIOSIS, BIOTECHDS, SCISEARCH, HCAPLUS, NTIS,
     LIFESCI' ENTERED AT 10:58:39 ON 12 MAY 2006
L1          8037 S TESTIS (2W) SPECIFIC
L2          1048 S TYROSINE (2W) LIGASE?
L3             7 S L1 AND L2
L4             3 DUP REM L3 (4 DUPLICATES REMOVED)
L5       7685185 S CLON? OR EXPRESS? OR RECOMBINANT
L6           221 S L2 AND L5
L7            75 S HUMAN AND L6
L8            45 DUP REM L7 (30 DUPLICATES REMOVED)
L9         22846 S "CPG ISLAND?"
L10           12 S L2 AND L9
L11           10 DUP REM L10 (2 DUPLICATES REMOVED)
                 E FEDER J N/AU
L12          187 S E3
                 E NELSON T C/AU
L13          130 S E3
                 E WU S/AU
L14         3643 S E3
                 E KRYSTEK S R/AU
L15          204 S E3-E12
L16         4127 S L12 OR L13 OR L14 OR L15
L17            2 S L2 AND L16
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 NEWS  4  FEB 21   STN AnaVist, Version 1.1, lets you share your STN AnaVist
                   visualization results
 NEWS  5  FEB 22   The IPC thesaurus added to additional patent databases on STN
 NEWS  6  FEB 22   Updates in EPFULL; IPC 8 enhancements added
 NEWS  7  FEB 27   New STN AnaVist pricing effective March 1, 2006
 NEWS  8  MAR 03   Updates in PATDPA; addition of IPC 8 data without attributes
 NEWS  9  MAR 08   X.25 communication option no longer available after June 2006
 NEWS 10  MAR 22   EMBASE is now updated on a daily basis
 NEWS 11  APR 03   New IPC 8 fields and IPC thesaurus added to PATDPAFULL
 NEWS 12  APR 03   Bibliographic data updates resume; new IPC 8 fields and IPC
                   thesaurus added in PCTFULL
 NEWS 13  APR 04   STN AnaVist $500 visualization usage credit offered
 NEWS 14  APR 12   LINSPEC, learning database for INSPEC, reloaded and enhanced
 NEWS 15  APR 12   Improved structure highlighting in FQHIT and QHIT display
                   in MARPAT
 NEWS 16  APR 12   Derwent World Patents Index to be reloaded and enhanced during
                   second quarter; strategies may be affected
 NEWS 17  MAY 10   CA/CAplus enhanced with 1900-1906 U.S. patent records
 NEWS 18  MAY 11   KOREAPAT updates resume

 NEWS EXPRESS  FEBRUARY 15 CURRENT VERSION FOR WINDOWS IS V8.01a,
               CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
               AND CURRENT DISCOVER FILE IS DATED 19 DECEMBER 2005.
               V8.0 AND V8.01 USERS CAN OBTAIN THE UPGRADE TO V8.01a AT
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=> s testis (2w) specific
L1 8037 TESTIS (2W) SPECIFIC

=> s tyrosine (2w) ligase?
L2 1048 TYROSINE (2W) LIGASE?

=> s l1 and l2
L3 7 L1 AND L2

=> dup rem l3
PROCESSING COMPLETED FOR L3
L4 3 DUP REM L3 (4 DUPLICATES REMOVED)

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L4 ANSWER 1 OF 3 MEDLINE on STN DUPLICATE 1

ACCESSION NUMBER: 2006238451 IN-PROCESS

DOCUMENT NUMBER: PubMed ID: 16443334

TITLE: The testis-specific apoptosis related gene TTL.6 underwent adaptive evolution in the lineage leading to humans.

AUTHOR: Chen Xiao-hua; Shi Hong; Liu Xiao-Lin; Su Bing

CORPORATE SOURCE: Key Laboratory of Cellular and Molecular Evolution, Kunming Institute of Zoology, The Chinese Academy of Sciences (CAS), Kunming, China.

SOURCE: Gene, (2006 Mar 29) Vol. 370, pp. 58-63. Electronic Publication: 2006-01-27.
Journal code: 7706761. ISSN: 0378-1119.

PUB. COUNTRY: Netherlands

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

FILE SEGMENT: NONMEDLINE; IN-PROCESS; NONINDEXED; Priority Journals

OTHER SOURCE: GENBANK-AY898275; GENBANK-AY898276; GENBANK-AY898277; GENBANK-AY898278; GENBANK-AY898279; GENBANK-AY898280; GENBANK-AY898281; GENBANK-AY898282; GENBANK-AY898283; GENBANK-AY898284; GENBANK-AY898285; GENBANK-AY898286; GENBANK-AY898287; GENBANK-AY898288; GENBANK-AY898289; GENBANK-AY898290; GENBANK-AY898291; GENBANK-AY898292; GENBANK-AY898293; GENBANK-AY898294; GENBANK-AY898295; GENBANK-AY898296; GENBANK-AY898297; GENBANK-AY898298; GENBANK-AY898299; GENBANK-AY898300; GENBANK-AY898301; GENBANK-AY898302; GENBANK-AY898303; GENBANK-AY898304; GENBANK-AY898305; GENBANK-AY898306; GENBANK-AY898307; GENBANK-AY898308; GENBANK-AY898309; GENBANK-AY898310; GENBANK-AY898311; GENBANK-AY898312; GENBANK-AY898313; GENBANK-AY898314; GENBANK-AY898315; GENBANK-AY898316; GENBANK-AY898317; GENBANK-AY898318; GENBANK-AY898319; GENBANK-AY898320; GENBANK-AY898321; GENBANK-AY898322; GENBANK-AY898323; GENBANK-AY898324; GENBANK-AY898325; GENBANK-AY898326; GENBANK-AY898327; GENBANK-AY898328; GENBANK-AY898329; GENBANK-AY898330; GENBANK-AY898331; GENBANK-AY898332; GENBANK-AY898333; GENBANK-AY898334; GENBANK-AY898335; GENBANK-AY898336; GENBANK-AY898337; GENBANK-AY898338; GENBANK-AY898339; GENBANK-AY898340; GENBANK-AY898341; GENBANK-AY898342; GENBANK-AY898343; GENBANK-AY898344; GENBANK-AY898345; GENBANK-AY898346; GENBANK-AY898347; GENBANK-AY898348; GENBANK-AY898349; GENBANK-AY898350; GENBANK-AY898351; GENBANK-AY898352; GENBANK-AY898353; GENBANK-AY898354; GENBANK-AY898355; GENBANK-AY898356; GENBANK-AY898357; GENBANK-AY898358; GENBANK-AY898359; GENBANK-AY898360; GENBANK-AY898361; GENBANK-AY898362; GENBANK-AY898363; GENBANK-AY898364; GENBANK-AY898365; GENBANK-AY898366; GENBANK-AY898367; GENBANK-AY898368; GENBANK-AY898369; GENBANK-AY898370; GENBANK-AY898371; GENBANK-AY898372; GENBANK-AY898373; GENBANK-AY898374; GENBANK-AY898375; GENBANK-AY898376; GENBANK-AY898377; GENBANK-AY898378; GENBANK-AY898379; GENBANK-AY898380; GENBANK-AY898381; GENBANK-AY898382; GENBANK-AY898383; GENBANK-AY898384; GENBANK-AY898385; GENBANK-AY898386; GENBANK-AY898387; GENBANK-AY898388; GENBANK-AY898389; GENBANK-AY898390; GENBANK-AY898391; GENBANK-AY898392; GENBANK-AY898393; GENBANK-AY898394; GENBANK-AY898395; GENBANK-AY898396; GENBANK-AY898397; GENBANK-AY898398; GENBANK-AY898399; GENBANK-AY898400; GENBANK-AY898401; GENBANK-AY898402; GENBANK-AY898403; GENBANK-AY898404; GENBANK-AY898405; GENBANK-AY898406; GENBANK-AY898407; GENBANK-AY898408; GENBANK-AY898409; GENBANK-AY898410; GENBANK-AY898411; GENBANK-AY898412;

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GENBANK-AY898602; GENBANK-AY898603; GENBANK-AY898604;

GENBANK-AY898605; GENBANK-AY898606; GENBANK-AY898607;
GENBANK-AY898608; GENBANK-AY898609; GENBANK-AY898610
ENTRY DATE: Entered STN: 2 May 2006
Last Updated on STN: 2 May 2006
AB The TTL.6 gene is a member of the tubulin-**tyrosine ligase** (TTL) family involved in apoptosis and preferentially expressed in the testis. We sequenced the coding region and part of the introns of TTL.6 in world wide human populations and five representative nonhuman primate species covering great apes, lesser ape and Old World monkey. The sequence substitution patterns of TTL.6 in primates demonstrated a sharp difference in evolutionary rates among different primate lineages. Our results indicated an accelerated evolution of TTL.6 in the human lineage, which was caused by Darwinian positive selection. Further analysis on sequence variations in human populations demonstrated an excess of derived common alleles, which was likely caused by genetic hitchhiking, an implication of recent positive selection on TTL.6 in human populations.

L4 ANSWER 2 OF 3 BIOTECHDS COPYRIGHT 2006 THE THOMSON CORP. on STN
DUPLICATE 2
ACCESSION NUMBER: 2004-07314 BIOTECHDS
TITLE: New **testis-specific** tubulin **tyrosine-ligase**-like BGS-42 polypeptide, useful for preventing, treating or ameliorating a medical condition, e.g. aberrant cellular proliferation, reproductive disorders or testicular disorders;
involving vector-mediated gene transfer, expression in host cell for use in gene therapy
AUTHOR: FEDER J N; WU S; NELSON T C
PATENT ASSIGNEE: BRISTOL-MYERS SQUIBB CO
PATENT INFO: WO 2004005487 15 Jan 2004
APPLICATION INFO: WO 2003-US21605 9 Jul 2003
PRIORITY INFO: US 2002-394725 9 Jul 2002; US 2002-394725 9 Jul 2002
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 2004-099381 [10]
AB DERWENT ABSTRACT:
NOVELTY - A **testis-specific** tubulin **tyrosine -ligase**-like polypeptide, designated BGS-42 polypeptide, is new.
DETAILED DESCRIPTION - A **testis-specific** tubulin **tyrosine-ligase**-like polypeptide, designated BGS-42 polypeptide comprises or consists of:(a) a polypeptide fragment, domain, epitope or the full-length protein of a fully defined sequence of 541 amino acids (I), as given in the specification, or the encoded sequence included in ATCC Deposit Number PTA-4454, having **tyrosine** tubulin **ligase** activity; (b) a polypeptide comprising amino acids 2-541 of the sequence of (I), where the amino acids 2-541 comprises a polypeptide of (I) minus the start methionine; (c) a polypeptide comprising amino acids 1-541 or 73-365 of the sequence of (I); or (d) a polypeptide comprising at least 424 contiguous amino acids of the sequence of (I). INDEPENDENT CLAIMS are also included for: (1) an isolated nucleic acid molecule comprising or consisting of: (a) a polynucleotide fragment of 1838 bp (II), fully defined in the specification, or a polynucleotide fragment of the cDNA sequence included in ATCC Deposit Number PTA-4454, which is hybridizable to the sequence of (II); (b) a polynucleotide encoding a polypeptide fragment, domain, epitope or the full-length protein of the sequence of (I), or a polypeptide fragment, domain or epitope encoded by the cDNA sequence included in ATCC Deposit Number PTA-4454, which is hybridizable to the sequence of (II), having **tyrosine** tubulin **ligase** activity; (c) a polynucleotide which is a variant or an allelic variant of (II); (d) nucleotides 156-1775 of the sequence of (II), where the nucleotides encode a polypeptide corresponding to amino acids 2-541 of

(I) minus the start methionine; (e) nucleotides 153-1775 of the sequence of (II), where the nucleotides encode a polypeptide corresponding to amino acids 1-541 of (I) including the start codon; (f) nucleotides 369-1247 of the sequence of (II), where the nucleotides encode a polypeptide corresponding to amino acids 73-365 of (I); (g) a polynucleotide that encodes at least 424 contiguous amino acids of (I); (h) at least 1272 contiguous nucleotides of (II); (i) a polynucleotide which represents the complementary sequence (antisense) of (II); (j) a polynucleotide capable of hybridizing under stringent conditions to any one of the polynucleotides above, where the polynucleotide does not hybridize under stringent conditions to a nucleic acid molecule having a nucleotide sequence of only A or only T residues; (k) a polynucleotide comprising or consisting of the BGS-42 gene or BGS-42 promoter; or (l) a nucleotide sequence of 2241 bp, fully defined in the specification; (2) a recombinant vector comprising the isolated nucleic acid molecule; (3) an isolated antibody that binds specifically to BGS-42 polypeptide; (4) a recombinant host cell comprising the vector sequences, or expressing the BGS-42 polypeptide; (5) making an isolated polypeptide; (6) preventing, treating or ameliorating a medical condition; and (7) diagnosing a pathological condition or a susceptibility to a pathological condition in a subject.

WIDER DISCLOSURE - Also disclosed are screening methods for identifying agonists and antagonists of the polynucleotides and polypeptides, and methods of controlling the expression of the polypeptide.

BIOTECHNOLOGY - Preparation (claimed): The BGS-42 polypeptide is prepared by standard recombinant methods. Making an isolated polypeptide comprises culturing the recombinant host cell under conditions such that the polypeptide is expressed, and recovering the polypeptide. Preferred Polypeptide: The full-length protein comprises sequential amino acid deletions from the C-terminus or the N-terminus. Preferred Nucleic Acid: The polynucleotide fragment consists of a nucleotide sequence encoding a human **tyrosine** tubulin **ligase**. Preferred Method:
Preventing, treating or ameliorating a medical condition comprises administering to a mammalian subject a therapeutic amount of the BGS-42 polypeptide or its modulator. Diagnosing a pathological condition or a susceptibility to a pathological condition in a subject comprises determining the presence or absence of a mutation in the polynucleotide cited above, and diagnosing a pathological condition or a susceptibility to a pathological condition based on the presence or absence of the mutation. Alternatively, the method comprises determining the presence or amount of expression of the BGS-42 polypeptide in a **tyrosine** tubulin **ligase** sample, and diagnosing a pathological condition or a susceptibility to a pathological condition based on the presence or amount of expression of the polypeptide.

ACTIVITY - Cytostatic; Respiratory-Gen.; Gastrointestinal-Gen.; Neuroprotective; Endocrine-Gen.; Antiinflammatory; Anabolic; Hypertensive; Osteopathic; Nootropic; Antiparkinsonian; Antiarthritic; Antiasthmatic; Anti-HIV; Antibacterial; Immunosuppressive; Antiseborrheic; Dermatological. No biological data given.

MECHANISM OF ACTION - **Tyrosine Ligase** Modulator; Gene Therapy. No biological data given.

USE - The BGS-42 polypeptide or polynucleotide can be used for diagnosing a pathological condition or a susceptibility to a pathological condition in a subject, and for preventing, treating or ameliorating a medical condition, such as a disorder related to aberrant tubulin ligase activity, a disorder related to aberrant tubulin-carboxypeptidase activity, aberrant cellular proliferation, reproductive disorders, testicular disorders, testicular cancer, pulmonary disorders, lung cancer, gastrointestinal disorders, colon cancer, stomach cancer, neural disorders, brain cancer, liver cancer, or proliferative condition of the testis, lung, small intestine, brain or lymph tissue (all claimed). The BGS-42 polypeptide, polynucleotide, or their modulators are also useful for treating infertility, Cushing's syndrome, emphysema, pneumonia,

Addison's disease, acromegaly, Alzheimer's disease, or Parkinson's disease. The BGS-42 polypeptide can be used as a preventive agent for immunological disorders including arthritis, asthma, AIDS, sepsis, acne, Sjogren's disease or scleroderma. The antibodies may be used to purify, detect and target the BGS-42 polypeptides.

ADMINISTRATION - Administration of the antibody is 0.1-100 (preferably 1-10) mg/kg, intradermally, intramuscularly, intraperitoneally, intravenously, subcutaneously, intranasally, epidurally, intraventricularly, intrathecally, topically, orally, or rectally.

EXAMPLE - A polynucleotide encoding a BGS-42 polypeptide was amplified using PCR oligonucleotide primers corresponding to the 5' and 3' ends of the DNA sequence to synthesize insertion fragments. The pQE-9 vector was digested with BamHI and XbaI and the amplified fragment was ligated into the pQE-9 vector maintaining the reading frame initiated at the bacterial ribosome-binding site. The ligation mixture was used to transform Escherichia coli strain M15/rep4. Transformants were identified by their ability to grow on LB (Luria bertani) plates, and ampicillin/kanamycin-resistant colonies were selected. Clones containing the desired constructs were grown overnight in liquid culture, i.e. LB media, supplemented with both ampicillin and kanamycin. Isopropyl-B-D-thiogalacto pyranoside (IPTG) was added to induce gene expression. Cells were grown for an extra 3-4 hours, and cells were harvested by centrifugation. The cell pellet obtained by centrifugation was solubilized, and the solubilized BGS-42 protein was purified using a metal chelating column under conditions that allow tight binding of the protein. (343 pages)

L4 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:722839 HCAPLUS
DOCUMENT NUMBER: 141:238811
TITLE: Protein and cDNA sequences of a novel human **testis-specific** tubulin **tyrosine ligase** like protein BGS-42, and diagnostic and therapeutic use
INVENTOR(S): Feder, John N.; Nelson, Thomas C.; Wu, Shujian; Krystek, Stanley R.
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 199 pp., Cont.-in-part of U.S. Ser. No. 615,659.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
US 2004171131	A1	20040902	US 2003-635977		20030807
US 2004157234	A1	20040812	US 2003-615659		20030709
PRIORITY APPLN. INFO.:			US 2002-394725P	P	20020709
			US 2003-615659	A2	20030709

AB The present invention provides novel polynucleotides encoding BGS-42 polypeptides, fragments and homologues thereof Also provided are vectors, host cells, antibodies, and recombinant and synthetic methods for producing said polypeptides. The invention further relates to diagnostic and therapeutic methods for applying these novel BGS-42 polypeptides to the diagnosis, treatment, and/or prevention of various diseases and/or disorders related to these polypeptides. The invention further relates to screening methods for identifying agonists and antagonists of the polynucleotides and polypeptides of the present invention.

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     FILE 'MEDLINE, EMBASE, BIOSIS, BIOTECHDS, SCISEARCH, HCAPLUS, NTIS,
     LIFESCI' ENTERED AT 10:58:39 ON 12 MAY 2006
L1          8037 S TESTIS (2W) SPECIFIC
L2          1048 S TYROSINE (2W) LIGASE?
L3             7 S L1 AND L2
L4             3 DUP REM L3 (4 DUPLICATES REMOVED)

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L5       7685185 CLON? OR EXPRESS? OR RECOMBINANT

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L6          221 L2 AND L5

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PROCESSING COMPLETED FOR L7
L8           45 DUP REM L7 (30 DUPLICATES REMOVED)

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L8   ANSWER 1 OF 45  HCAPLUS  COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER:         2006:234798  HCAPLUS
DOCUMENT NUMBER:          144:310079
TITLE:                    Genes showing changes in levels of gene
                          expression in renal tubule injury induced by
                          poisoning and their toxicological use
INVENTOR(S):              Natsoulis, Georges; Fielden, Mark; Jarnagin, Kurt;
                          Kolaja, Kyle
PATENT ASSIGNEE(S):       USA
SOURCE:                   U.S. Pat. Appl. Publ., 40 pp.
                          CODEN: USXXCO
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.           KIND   DATE        APPLICATION NO.         DATE
     ---------------      ----   --------    --------------------    --------
     US 2006057066         A1    20060316    US 2005-184272          20050718
     WO 2006033701         A2    20060330    WO 2005-US25890         20050719
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
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             LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA,
             NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK,
             SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU,
             ZA, ZM, ZW
         RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
             IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,
             CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
             GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
             KG, KZ, MD, RU, TJ, TM
PRIORITY APPLN. INFO.:                   US 2004-589409P     P  20040719
                                         US 2005-184272      A  20050718
AB   A set of 186 genes that show changes in levels of gene expression
     in in renal tubules in response to poisoning are identified for use as
     markers in screening for substances capable of causing renal tubule
     injury.  The invention also provides a necessary set of 186 genes useful
     for generating signatures of varying size and performance capable of
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predicting onset of renal tubule injury. The invention also provides methods, apparatuses and reagents useful for predicting future renal tubule injury based on **expression** levels of genes in the signatures. In one particular embodiment the invention provides a method for predict whether a compound will induce renal tubule injury using gene **expression** data from sub-acute treatments.

L8 ANSWER 2 OF 45 MEDLINE on STN DUPLICATE 1
ACCESSION NUMBER: 2006059636 MEDLINE
DOCUMENT NUMBER: PubMed ID: 16429158
TITLE: Disrupted function and axonal distribution of mutant tyrosyl-tRNA synthetase in dominant intermediate Charcot-Marie-Tooth neuropathy.
AUTHOR: Jordanova Albena; Irobi Joy; Thomas Florian P; Van Dijck Patrick; Meerschaert Kris; Dewil Maarten; Dierick Ines; Jacobs An; De Vriendt Els; Guergueltcheva Velina; Rao Chitharanjan V; Tournev Ivailo; Gondim Francisco A A; D'Hooghe Marc; Van Gerwen Veerle; Callaerts Patrick; Van Den Bosch Ludo; Timmermans Jean-Pierre; Robberecht Wim; Gettemans Jan; Thevelein Johan M; De Jonghe Peter; Kremensky Ivo; Timmerman Vincent
CORPORATE SOURCE: Department of Molecular Genetics, Flanders Interuniversity Institute for Biotechnology, University of Antwerp, Universiteitsplein 1, 2610 Antwerpen, Belgium.
SOURCE: Nature genetics, (2006 Feb) Vol. 38, No. 2, pp. 197-202. Electronic Publication: 2006-01-22. Journal code: 9216904. ISSN: 1061-4036.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-NM004102; GENBANK-NM004814; GENBANK-NM005610; GENBANK-NM012392; GENBANK-NM014676; GENBANK-NM023009; GENBANK-NM030786; GENBANK-NM052896; GENBANK-NM145238; GENBANK-NP003680; GENBANK-NP011701; GENBANK-NP247363; GENBANK-NP598912; GENBANK-NT004511; SWISSPROT-P00952
ENTRY MONTH: 200604
ENTRY DATE: Entered STN: 31 Jan 2006
Last Updated on STN: 5 Apr 2006
Entered Medline: 4 Apr 2006
AB Charcot-Marie-Tooth (CMT) neuropathies are common disorders of the peripheral nervous system caused by demyelination or axonal degeneration, or a combination of both features. We previously assigned the locus for autosomal dominant intermediate CMT neuropathy type C (DI-CMTC) to chromosome 1p34-p35. Here we identify two heterozygous missense mutations (G41R and E196K) and one de novo deletion (153-156delVKQV) in tyrosyl-tRNA synthetase (YARS) in three unrelated families affected with DI-CMTC. Biochemical experiments and genetic complementation in yeast show partial loss of aminoacylation activity of the mutant proteins, and mutations in YARS, or in its yeast ortholog TYS1, reduce yeast growth. YARS localizes to axonal termini in differentiating primary motor neuron and neuroblastoma cultures. This specific distribution is significantly reduced in cells **expressing** mutant YARS proteins. YARS is the second aminoacyl-tRNA synthetase found to be involved in CMT, thereby linking protein-synthesizing complexes with neurodegeneration.

L8 ANSWER 3 OF 45 MEDLINE on STN DUPLICATE 2
ACCESSION NUMBER: 2006238451 IN-PROCESS
DOCUMENT NUMBER: PubMed ID: 16443334
TITLE: The testis-specific apoptosis related gene TTL.6 underwent adaptive evolution in the lineage leading to **humans**.
AUTHOR: Chen Xiao-hua; Shi Hong; Liu Xiao-Lin; Su Bing
CORPORATE SOURCE: Key Laboratory of Cellular and Molecular Evolution, Kunming

Institute of Zoology, The Chinese Academy of Sciences (CAS), Kunming, China.
SOURCE: Gene, (2006 Mar 29) Vol. 370, pp. 58-63. Electronic Publication: 2006-01-27.
Journal code: 7706761. ISSN: 0378-1119.
PUB. COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: NONMEDLINE; IN-PROCESS; NONINDEXED; Priority Journals
OTHER SOURCE: GENBANK-AY898275; GENBANK-AY898276; GENBANK-AY898277;
GENBANK-AY898278; GENBANK-AY898279; GENBANK-AY898280;
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GENBANK-AY898602; GENBANK-AY898603; GENBANK-AY898604;
GENBANK-AY898605; GENBANK-AY898606; GENBANK-AY898607;
GENBANK-AY898608; GENBANK-AY898609; GENBANK-AY898610

ENTRY DATE: Entered STN: 2 May 2006
Last Updated on STN: 2 May 2006

AB The TTL.6 gene is a member of the tubulin-**tyrosine ligase** (TTL) family involved in apoptosis and preferentially **expressed** in the testis. We sequenced the coding region and part of the introns of TTL.6 in world wide **human** populations and five representative nonhuman primate species covering great apes, lesser ape

and Old World monkey. The sequence substitution patterns of TTL.6 in primates demonstrated a sharp difference in evolutionary rates among different primate lineages. Our results indicated an accelerated evolution of TTL.6 in the **human** lineage, which was caused by Darwinian positive selection. Further analysis on sequence variations in **human** populations demonstrated an excess of derived common alleles, which was likely caused by genetic hitchhiking, an implication of recent positive selection on TTL.6 in **human** populations.

L8 ANSWER 4 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 3
ACCESSION NUMBER: 2005:156228 HCAPLUS
Correction of: 2005:16967
DOCUMENT NUMBER: 142:192331
Correction of: 142:108390
TITLE: Quantitative RT-PCR method for the detection in blood of microarray-identified rheumatoid arthritis-related gene transcripts for diagnosing and monitoring disease state
INVENTOR(S): Liew, Choong-Chin
PATENT ASSIGNEE(S): Chondrogene Limited, Can.
SOURCE: U.S. Pat. Appl. Publ., 81 pp., Cont.-in-part of U.S. Ser. No. 802,875.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 29
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005003394	A1	20050106	US 2004-812782	20040330
US 2004014059	A1	20040122	US 2002-268730	20021009
US 2005191637	A1	20050901	US 2004-803737	20040318
US 2005196762	A1	20050908	US 2004-803759	20040318
US 2005196763	A1	20050908	US 2004-803857	20040318
US 2005196764	A1	20050908	US 2004-803858	20040318
US 2005208505	A1	20050922	US 2004-803648	20040318
US 2004265869	A1	20041230	US 2004-812716	20040330
PRIORITY APPLN. INFO.:			US 1999-115125P	P 19990106
			US 2000-477148	B1 20000104
			US 2002-268730	A2 20021009
			US 2003-601518	A2 20030620
			US 2004-802875	A2 20040312

AB The present invention is directed to detection and measurement of gene transcripts and their equivalent nucleic acid products in blood for diagnosing and monitoring diseases. The present invention demonstrates that a simple drop of blood may be used to determine the quant. **expression** of various mRNAs that reflect the health/disease state of the subject through the use of quant. reverse transcription-polymerase chain reaction (QRT-PCR) anal. Specifically provided is anal. performed on a drop of blood for detecting, diagnosing and monitoring rheumatoid arthritis using gene-specific and/or tissue-specific primers. The present invention also describes methods by which delineation of the sequence and/or quantitation of the **expression** levels of disease-specific genes allows for an immediate and accurate diagnostic/prognostic test for disease or to assess the effect of a particular treatment regimen.

L8 ANSWER 5 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:1311496 HCAPLUS
DOCUMENT NUMBER: 144:49649
TITLE: Association of gene **expression** profiles with asthma in peripheral blood cells
INVENTOR(S): Kachalsky, Sylvia G.; Horev, Guy
PATENT ASSIGNEE(S): Linkagene Ltd., Israel

SOURCE: PCT Int. Appl., 74 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005118403	A2	20051215	WO 2005-IL590	20050605

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2004-576599P P 20040604

AB The present invention relates to methods of identifying biomarkers for disease, which comprise measuring gene **expression** levels in subpopulations of blood cells obtained from subjects of closed populations. Particularly, the present invention relates to methods of diagnosing, monitoring and prognosing diseases comprising determining **expression** levels of disease-specific genes. Thus, a library of about 41,500 cDNA **clones** derived from the I.M.A.G.E consortium was printed in microarrays comprising the whole transcriptome and used to screen RNA isolated from leukocytes from a Cochin Jewish population known as susceptible to high occurrences of asthma. Comparison of **expression** profiles from asthma and non-asthma individuals identified 783 biomarker transcripts for asthma.

L8 ANSWER 6 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:984082 HCAPLUS
DOCUMENT NUMBER: 143:280551
TITLE: **Human** glucocorticoid receptor coactivator STAMP modulating glucocorticoid-responsive gene **expression**, its orangutan and green monkey homolog, and therapeutic use thereof
INVENTOR(S): Simons, S. Stoney, Jr.; He, Yuanzheng
PATENT ASSIGNEE(S): Government of the United States of America as Represented by the Secretary of the Department of Health and Human Services, USA
SOURCE: PCT Int. Appl., 235 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005082935	A1	20050909	WO 2005-US6393	20050225

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,

AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2004-548039P P 20040226

AB The invention provides a new glucocorticoid receptor (GR) coactivator named STAMP (SRC-1 and TIF2 Associated Modulatory Protein) that can modulate transcription of glucocorticoid-responsive genes. The isolated STAMP gene is located on chromosome 14q24.3 and contains 32 introns, and its encodes a 1277 amino acid protein (predominant form, with predicted mol. weight of 143 kDa) or a 1281 amino acid protein with four extra amino acid at N-terminus. Activity of STAMP in GR-mediated induction. STAMP and TIF2 act cooperatively to modulate glucocorticoid receptor activity and STAMP activity requires the RID (receptor interaction domain) domains (around residues 834-1277) that mediate TIF2 binding to GR and/or STAMP. Also provided are siRNAs shown to inhibit STAMP actions. The invention also provides antibodies that can bind STAMP and modulate its activity. In addition, the invention provides antisense, ribozyme and siRNA STAMP nucleic acids that can modulate the **expression** of STAMP. Also provided are compns. and methods for modulating glucocorticoid-responsive gene **expression** and for treating a variety of diseases and conditions.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 7 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:497356 HCAPLUS

DOCUMENT NUMBER: 143:39118

TITLE: Gene **expression** profiling for diagnosis, prognosis, and therapy of osteoarthritis and other diseases using microarrays

INVENTOR(S): Liew, Choong-chin

PATENT ASSIGNEE(S): Chondrogene Limited, Can.

SOURCE: U.S. Pat. Appl. Publ., 157 pp., Cont.-in-part of U.S. Ser. No. 802,875.
CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 29

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005123938	A1	20050609	US 2004-809675	20040325
US 2004037841	A1	20040226	US 2002-85783	20020228
US 2004014059	A1	20040122	US 2002-268730	20021009
US 2005191637	A1	20050901	US 2004-803737	20040318
US 2005196762	A1	20050908	US 2004-803759	20040318
US 2005196763	A1	20050908	US 2004-803857	20040318
US 2005196764	A1	20050908	US 2004-803858	20040318
US 2005208505	A1	20050922	US 2004-803648	20040318
US 2004248169	A1	20041209	US 2004-812737	20040330
AU 2004249318	A1	20041229	AU 2004-249318	20040621
CA 2530191	AA	20041229	CA 2004-2530191	20040621
WO 2004112589	A2	20041229	WO 2004-US20836	20040621

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,

SN, TD, TG

EP 1643893	A2	20060412	EP 2004-785715	20040621

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR

PRIORITY APPLN. INFO.:

US 1999-115125P	P	19990106
US 2000-477148	B1	20000104
US 2001-271955P	P	20010228
US 2001-275017P	P	20010312
US 2001-305340P	P	20010713
US 2002-85783	A2	20020228
US 2002-268730	A2	20021009
US 2003-601518	A2	20030620
US 2004-802875	A2	20040312
US 2004-809675	A	20040325
WO 2004-US20836	W	20040621

AB The present invention relates to gene **expression** profiling for diagnosis, prognosis and therapy of osteoarthritis and other diseases using microarray methods. Specifically provided is anal. performed on a drop of blood for detecting, diagnosing and monitoring diseases using gene-specific and/or tissue-specific primers. Affymetrix **Human** Genome U133 and ChondroChip microarrays were used todetect differentially **expressed** gene transcripts in hypertension, obesity, allergy, systemic steroids, coronary artery disease, diabetes type 2, hyperlipidemia, lung disease, bladder cancer, rheumatoid arthritis, osteoarthritis, liver cancer, schizophrenia, Chagas disease, asthma, and manic depression syndrome. The present invention also describes methods by which delineation of the sequence and/or quantitation of the **expression** levels of disease-specific genes allows for an immediate and accurate diagnostic/prognostic test for disease or to assess the effect of a particular treatment regimen. [This abstract record is one of 3 records for this document necessitated by the large number of index entries required to fully index the document and publication system constraints.].

L8 ANSWER 8 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER:	2005:325595 HCAPLUS
DOCUMENT NUMBER:	142:353388
TITLE:	Gene **expression** profiles and biomarkers for the detection of Alzheimer's disease-related and other disease-related gene transcripts in blood
INVENTOR(S):	Liew, Choong-chin
PATENT ASSIGNEE(S):	Chondrogene Ltd., Can.
SOURCE:	U.S. Pat. Appl. Publ., 155 pp., Cont.-in-part of U.S. Ser. No. 802,875. CODEN: USXXCO
DOCUMENT TYPE:	Patent
LANGUAGE:	English
FAMILY ACC. NUM. COUNT:	29

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005079514	A1	20050414	US 2004-812827	20040330
US 2004014059	A1	20040122	US 2002-268730	20021009
US 2005191637	A1	20050901	US 2004-803737	20040318
US 2005196762	A1	20050908	US 2004-803759	20040318
US 2005196763	A1	20050908	US 2004-803857	20040318
US 2005196764	A1	20050908	US 2004-803858	20040318
US 2005208505	A1	20050922	US 2004-803648	20040318
US 2004265869	A1	20041230	US 2004-812716	20040330

PRIORITY APPLN. INFO.:

US 1999-115125P	P	19990106
US 2000-477148	B1	20000104
US 2002-268730	A2	20021009
US 2003-601518	A2	20030620

US 2004-802875 A2 20040312

AB The present invention is directed to detection and measurement of gene transcripts and their equivalent nucleic acid products in blood. Specifically provided is anal. performed on a drop of blood for detecting, diagnosing, and monitoring diseases, and in particular Alzheimer's disease, using gene-specific and/or tissue-specific primers. Affymetrix **Human** Genome U133 and ChondroChip microarrays were used to detect differentially **expressed** gene transcripts in hypertension, obesity, allergy, systemic steroids, coronary artery disease, diabetes type 2, hyperlipidemia, lung disease, bladder cancer, rheumatoid arthritis, osteoarthritis, liver cancer, schizophrenia, Chagas disease, asthma, and manic depression syndrome. The present invention describes methods by which delineation of the sequence and/or quantitation of the **expression** levels of disease-specific genes allows for an immediate and accurate diagnostic/prognostic test for disease or to assess the effect of a particular treatment regimen.

L8 ANSWER 9 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:160724 HCAPLUS
DOCUMENT NUMBER: 142:259424
TITLE: Gene **expression** profiles and biomarkers for the detection of asthma-related and other disease-related gene transcripts in blood
INVENTOR(S): Liew, Choong-Chin
PATENT ASSIGNEE(S): Chondrogene Limited, Can.
SOURCE: U.S. Pat. Appl. Publ., 156 pp., Cont.-in-part of U.S. Ser. No. 802,875.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 29
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005042630	A1	20050224	US 2004-816357	20040401
US 2004014059	A1	20040122	US 2002-268730	20021009
US 2005191637	A1	20050901	US 2004-803737	20040318
US 2005196762	A1	20050908	US 2004-803759	20040318
US 2005196763	A1	20050908	US 2004-803857	20040318
US 2005196764	A1	20050908	US 2004-803858	20040318
US 2005208505	A1	20050922	US 2004-803648	20040318
US 2004265869	A1	20041230	US 2004-812716	20040330
PRIORITY APPLN. INFO.:			US 1999-115125P	P 19990106
			US 2000-477148	B1 20000104
			US 2002-268730	A2 20021009
			US 2003-601518	A2 20030620
			US 2004-802875	A2 20040312

AB The present invention is directed to detection and measurement of gene transcripts and their equivalent nucleic acid products in blood. Specifically provided is anal. performed on a drop of blood for detecting, diagnosing, and monitoring diseases, and in particular asthma, using gene-specific and/or tissue-specific primers. Affymetrix **Human** Genome U133 and ChondroChip microarrays were used to detect differentially **expressed** gene transcripts in hypertension, obesity, allergy, systemic steroids, coronary artery disease, diabetes type 2, hyperlipidemia, lung disease, bladder cancer, rheumatoid arthritis, osteoarthritis, liver cancer, schizophrenia, Chagas disease, asthma, and manic depression syndrome. The present invention describes methods by which delineation of the sequence and/or quantitation of the **expression** levels of disease-specific genes allows for an immediate and accurate diagnostic/prognostic test for disease or to assess the effect of a particular treatment regimen. [This abstract record is one of three records for this document necessitated by the large number of index

entries required to fully index the docoment and publication system constraints.].

L8 ANSWER 10 OF 45 MEDLINE on STN
ACCESSION NUMBER: 2005148373 MEDLINE
DOCUMENT NUMBER: PubMed ID: 15779907
TITLE: Toward the full set of **human** mitochondrial aminoacyl-tRNA synthetases: characterization of AspRS and TyrRS.
AUTHOR: Bonnefond Luc; Fender Aurelie; Rudinger-Thirion Joelle; Giege Richard; Florentz Catherine; Sissler Marie
CORPORATE SOURCE: Department Mecanismes et Macromolecules de la Synthese Proteique et Cristallogenese, UPR 9002, Institut de Biologie Moleculaire et Cellulaire du CNRS, 15 rue Rene Descartes, F-67084 Strasbourg Cedex, France.
SOURCE: Biochemistry, (2005 Mar 29) Vol. 44, No. 12, pp. 4805-16. Journal code: 0370623. ISSN: 0006-2960.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200506
ENTRY DATE: Entered STN: 23 Mar 2005
Last Updated on STN: 10 Jun 2005
Entered Medline: 9 Jun 2005

AB The **human** mitochondrion possesses a translational machinery devoted to the synthesis of 13 proteins. While the required tRNAs and rRNAs are produced by transcription of the mitochondrial genome, all other factors needed for protein synthesis are synthesized in the cytosol and imported. This is the case for aminoacyl-tRNA synthetases, the enzymes which esterify their cognate tRNA with the specific amino acid. The genes for the full set of cytosolic aaRSs are well defined, but only nine genes for mitochondrial synthetases are known. Here we describe the genes for **human** mitochondrial aspartyl- and tyrosyl-tRNA synthetases and the initial characterization of the enzymes. Both belong to the expected class of synthetases, have a dimeric organization, and aminoacylate Escherichia coli tRNAs as well as in vitro transcribed **human** mitochondrial tRNAs. Genes for the remaining missing synthetases were also found with the exception of glutaminyl-tRNA synthetase. Their sequence analysis confirms and further extends the view that, except for lysyl- and glycyl-tRNA synthetases, **human** mitochondrial and cytosolic enzymes are coded by two different sets of genes.

L8 ANSWER 11 OF 45 MEDLINE on STN
ACCESSION NUMBER: 2005313865 MEDLINE
DOCUMENT NUMBER: PubMed ID: 15890843
TITLE: Tubulin polyglutamylase enzymes are members of the TTL domain protein family.
AUTHOR: Janke Carsten; Rogowski Krzysztof; Wloga Dorota; Regnard Catherine; Kajava Andrey V; Strub Jean-Marc; Temurak Nevzat; van Dijk Juliette; Boucher Dominique; van Dorsselaer Alain; Suryavanshi Swati; Gaertig Jacek; Edde Bernard
CORPORATE SOURCE: Centre de Recherches de Biochimie Macromoleculaire, CNRS, 34293 Montpellier, France.
SOURCE: Science, (2005 Jun 17) Vol. 308, No. 5729, pp. 1758-62. Electronic Publication: 2005-05-12. Journal code: 0404511. E-ISSN: 1095-9203.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200506
ENTRY DATE: Entered STN: 18 Jun 2005

Last Updated on STN: 1 Jul 2005
Entered Medline: 30 Jun 2005

AB Polyglutamylation of tubulin has been implicated in several functions of microtubules, but the identification of the responsible enzyme(s) has been challenging. We found that the neuronal tubulin polyglutamylase is a protein complex containing a tubulin **tyrosine ligase** -like (TTLL) protein, TTLL1. TTLL1 is a member of a large family of proteins with a TTL homology domain, whose members could catalyze ligations of diverse amino acids to tubulins or other substrates. In the model protist Tetrahymena thermophila, two conserved types of polyglutamylases were characterized that differ in substrate preference and subcellular localization.

L8 ANSWER 12 OF 45 SCISEARCH COPYRIGHT (c) 2006 The Thomson Corporation on STN

ACCESSION NUMBER: 2005:412589 SCISEARCH
THE GENUINE ARTICLE: 914YX
TITLE: 3-Nitrotyrosine attenuates respiratory syncytial virus infection in **human** bronchial epithelial cell line
AUTHOR: Huang Y C T (Reprint); Li Z W; Brighton L E; Carson J L; Becker S; Soukup J M
CORPORATE SOURCE: CB 7315, 104 Mason Farm Rd, Chapel Hill, NC 27599 USA (Reprint); US EPA, Natl Hlth & Environm Effects Res Lab, Off Res & Dev, Res Triangle Pk, NC 27711 USA; Univ N Carolina, Ctr Environm Med Asthma & Lung Biol, Chapel Hill, NC USA
huang.tony@epa.gov
COUNTRY OF AUTHOR: USA
SOURCE: AMERICAN JOURNAL OF PHYSIOLOGY-LUNG CELLULAR AND MOLECULAR PHYSIOLOGY, (MAY 2005) Vol. 288, No. 5, pp. L988-L996. ISSN: 1040-0605.
PUBLISHER: AMER PHYSIOLOGICAL SOC, 9650 ROCKVILLE PIKE, BETHESDA, MD 20814 USA.
DOCUMENT TYPE: Article; Journal
LANGUAGE: English
REFERENCE COUNT: 55
ENTRY DATE: Entered STN: 28 Apr 2005
Last Updated on STN: 28 Apr 2005

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB 3-Nitrotyrosine (NO2Tyr), an L-tyrosine derivative during nitrative stress, can substitute the COOH-terminal tyrosine of alpha-tubulin, posttranslationally altering microtubular functions. Because infection of the cells by respiratory syncytial virus (RSV) may require intact microtubules, we tested the hypothesis that NO2Tyr would inhibit RSV infection and intracellular signaling via nitrotyrosination of alpha-tubulin. A **human** bronchial epithelial cell line (BEAS-2B) was incubated with RSV with or without NO2Tyr. The release of chemokines and viral particles and activation of interferon regulatory factor-3 (IRF-3) were measured. Incubation with NO2Tyr increased nitrotyrosinated alpha-tubulin, and NO2Tyr colocalized with microtubules. RSV-infected cells released viral particles, RANTES, and IL-8 in a time- and dose-dependent manner, and intracellular RSV proteins coprecipitated with alpha-tubulin. NO2Tyr attenuated the RSV- induced release of RANTES, IL-8, and viral particles by 50-90% and decreased alpha-tubulin-associated RSV proteins. 3-Chlorotyrosine, another L-tyrosine derivative, had no effects. NO2Tyr also inhibited the RSV- induced shift of the unphosphorylated form I of IRF-3 to the phosphorylated form II. Pre-exposure of the cells to NO2 (0.15 ppm, 4 h), which produced diffuse protein tyrosine nitration, did not affect RSV- induced release of RANTES, IL-8, or viral particles. NO2Tyr did not affect the potential of viral spreading to the neighboring cells since the RSV titers were not decreased when the uninfected cells were cocultured with the preinfected cells in NO2Tyr-containing medium. These results indicate that NO2Tyr, by

replacing the COOH-terminal tyrosine of alpha-tubulin, attenuated RSV infection, and the inhibition appeared to occur at the early stages of RSV infection.

L8 ANSWER 13 OF 45 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN

ACCESSION NUMBER: 2005361787 EMBASE
TITLE: Protein photo-cross-linking in mammalian cells by site-specific incorporation of a photoreactive amino acid.
AUTHOR: Hino N.; Okazaki Y.; Kobayashi T.; Hayashi A.; Sakamoto K.; Yokoyama S.
CORPORATE SOURCE: S. Yokoyama, Department of Biophysics and Biochemistry, Graduate School of Science, The University of Tokyo, 7-3-1 Hongo, Bunkyo-ku, Tokyo 113-0033, Japan. yokoyama@biochem.s.u-tokyo.ac.jp
SOURCE: Nature Methods, (2005) Vol. 2, No. 3, pp. 201-206. .
Refs: 31
ISSN: 1548-7091
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 9 Sep 2005
Last Updated on STN: 9 Sep 2005

AB We report a method of photo-cross-linking proteins in mammalian cells, which is based on site-specific incorporation of a photoreactive amino acid, p-benzoyl-L-phenylalanine (pBpa), through the use of an expanded genetic code. To analyze the cell signaling interactions involving the adaptor protein Grb2, pBpa was incorporated in its Src homology 2 (SH2) domain. The **human** GRB2 gene with an amber codon was introduced into Chinese hamster ovary (CHO) cells, together with the genes for the Bacillus stearothermophilus suppressor tRNA(Tyr) and a pBpa-specific variant of Escherichia coli tyrosyl-tRNA synthetase (TyrRS). The Grb2 variant with pBpa in the amber position was synthesized when pBpa was included in the growth medium. Upon exposure of cells to 365-nm light, protein variants containing pBpa in the positions proximal to the ligand-binding pocket were cross-linked with the transiently **expressed** epidermal growth factor (EGF) receptor in the presence of an EGF stimulus. Cross-linked complexes with endogenous proteins were also detected. In vivo photo-cross-linking with pBpa incorporated in proteins will be useful for studying protein-protein interactions in mammalian cells.

L8 ANSWER 14 OF 45 BIOTECHDS COPYRIGHT 2006 THE THOMSON CORP. on STN
DUPLICATE 4

ACCESSION NUMBER: 2004-07314 BIOTECHDS
TITLE: New testis-specific tubulin **tyrosine-ligase** -like BGS-42 polypeptide, useful for preventing, treating or ameliorating a medical condition, e.g. aberrant cellular proliferation, reproductive disorders or testicular disorders ; involving vector-mediated gene transfer, **expression** in host cell for use in gene therapy
AUTHOR: FEDER J N; WU S; NELSON T C
PATENT ASSIGNEE: BRISTOL-MYERS SQUIBB CO
PATENT INFO: WO 2004005487 15 Jan 2004
APPLICATION INFO: WO 2003-US21605 9 Jul 2003
PRIORITY INFO: US 2002-394725 9 Jul 2002; US 2002-394725 9 Jul 2002
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 2004-099381 [10]

AB DERWENT ABSTRACT:
NOVELTY - A testis-specific tubulin **tyrosine-ligase**

-like polypeptide, designated BGS-42 polypeptide, is new.

DETAILED DESCRIPTION - A testis-specific tubulin **tyrosine-ligase**-like polypeptide, designated BGS-42 polypeptide comprises or consists of:(a) a polypeptide fragment, domain, epitope or the full-length protein of a fully defined sequence of 541 amino acids (I), as given in the specification, or the encoded sequence included in ATCC Deposit Number PTA-4454, having **tyrosine** tubulin **ligase** activity; (b) a polypeptide comprising amino acids 2-541 of the sequence of (I), where the amino acids 2-541 comprises a polypeptide of (I) minus the start methionine; (c) a polypeptide comprising amino acids 1-541 or 73-365 of the sequence of (I); or (d) a polypeptide comprising at least 424 contiguous amino acids of the sequence of (I). INDEPENDENT CLAIMS are also included for: (1) an isolated nucleic acid molecule comprising or consisting of: (a) a polynucleotide fragment of 1838 bp (II), fully defined in the specification, or a polynucleotide fragment of the cDNA sequence included in ATCC Deposit Number PTA-4454, which is hybridizable to the sequence of (II); (b) a polynucleotide encoding a polypeptide fragment, domain, epitope or the full-length protein of the sequence of (I), or a polypeptide fragment, domain or epitope encoded by the cDNA sequence included in ATCC Deposit Number PTA-4454, which is hybridizable to the sequence of (II), having **tyrosine** tubulin **ligase** activity; (c) a polynucleotide which is a variant or an allelic variant of (II); (d) nucleotides 156-1775 of the sequence of (II), where the nucleotides encode a polypeptide corresponding to amino acids 2-541 of (I) minus the start methionine; (e) nucleotides 153-1775 of the sequence of (II), where the nucleotides encode a polypeptide corresponding to amino acids 1-541 of (I) including the start codon; (f) nucleotides 369-1247 of the sequence of (II), where the nucleotides encode a polypeptide corresponding to amino acids 73-365 of (I); (g) a polynucleotide that encodes at least 424 contiguous amino acids of (I); (h) at least 1272 contiguous nucleotides of (II); (i) a polynucleotide which represents the complementary sequence (antisense) of (II); (j) a polynucleotide capable of hybridizing under stringent conditions to any one of the polynucleotides above, where the polynucleotide does not hybridize under stringent conditions to a nucleic acid molecule having a nucleotide sequence of only A or only T residues; (k) a polynucleotide comprising or consisting of the BGS-42 gene or BGS-42 promoter; or (l) a nucleotide sequence of 2241 bp, fully defined in the specification; (2) a **recombinant** vector comprising the isolated nucleic acid molecule; (3) an isolated antibody that binds specifically to BGS-42 polypeptide; (4) a **recombinant** host cell comprising the vector sequences, or **expressing** the BGS-42 polypeptide; (5) making an isolated polypeptide; (6) preventing, treating or ameliorating a medical condition; and (7) diagnosing a pathological condition or a susceptibility to a pathological condition in a subject.

WIDER DISCLOSURE - Also disclosed are screening methods for identifying agonists and antagonists of the polynucleotides and polypeptides, and methods of controlling the **expression** of the polypeptide.

BIOTECHNOLOGY - Preparation (claimed): The BGS-42 polypeptide is prepared by standard **recombinant** methods. Making an isolated polypeptide comprises culturing the **recombinant** host cell under conditions such that the polypeptide is **expressed**, and recovering the polypeptide. Preferred Polypeptide: The full-length protein comprises sequential amino acid deletions from the C-terminus or the N-terminus. Preferred Nucleic Acid: The polynucleotide fragment consists of a nucleotide sequence encoding a **human** **tyrosine** tubulin **ligase**. Preferred Method: Preventing, treating or ameliorating a medical condition comprises administering to a mammalian subject a therapeutic amount of the BGS-42 polypeptide or its modulator. Diagnosing a pathological condition or a susceptibility to a pathological condition in a subject comprises determining the presence or absence of a mutation in the polynucleotide cited above, and diagnosing a pathological condition or a susceptibility to a pathological condition

based on the presence or absence of the mutation. Alternatively, the method comprises determining the presence or amount of **expression** of the BGS-42 polypeptide in a **tyrosine** tubulin **ligase** sample, and diagnosing a pathological condition or a susceptibility to a pathological condition based on the presence or amount of **expression** of the polypeptide.

ACTIVITY - Cytostatic; Respiratory-Gen.; Gastrointestinal-Gen.; Neuroprotective; Endocrine-Gen.; Antiinflammatory; Anabolic; Hypertensive; Osteopathic; Nootropic; Antiparkinsonian; Antiarthritic; Antiasthmatic; Anti-HIV; Antibacterial; Immunosuppressive; Antiseborrheic; Dermatological. No biological data given.

MECHANISM OF ACTION - **Tyrosine Ligase** Modulator; Gene Therapy. No biological data given.

USE - The BGS-42 polypeptide or polynucleotide can be used for diagnosing a pathological condition or a susceptibility to a pathological condition in a subject, and for preventing, treating or ameliorating a medical condition, such as a disorder related to aberrant tubulin ligase activity, a disorder related to aberrant tubulin-carboxypeptidase activity, aberrant cellular proliferation, reproductive disorders, testicular disorders, testicular cancer, pulmonary disorders, lung cancer, gastrointestinal disorders, colon cancer, stomach cancer, neural disorders, brain cancer, liver cancer, or proliferative condition of the testis, lung, small intestine, brain or lymph tissue (all claimed). The BGS-42 polypeptide, polynucleotide, or their modulators are also useful for treating infertility, Cushing's syndrome, emphysema, pneumonia, Addison's disease, acromegaly, Alzheimer's disease, or Parkinson's disease. The BGS-42 polypeptide can be used as a preventive agent for immunological disorders including arthritis, asthma, AIDS, sepsis, acne, Sjogren's disease or scleroderma. The antibodies may be used to purify, detect and target the BGS-42 polypeptides.

ADMINISTRATION - Administration of the antibody is 0.1-100 (preferably 1-10) mg/kg, intradermally, intramuscularly, intraperitoneally, intravenously, subcutaneously, intranasally, epidurally, intraventricularly, intrathecally, topically, orally, or rectally.

EXAMPLE - A polynucleotide encoding a BGS-42 polypeptide was amplified using PCR oligonucleotide primers corresponding to the 5' and 3' ends of the DNA sequence to synthesize insertion fragments. The pQE-9 vector was digested with BamHI and XbaI and the amplified fragment was ligated into the pQE-9 vector maintaining the reading frame initiated at the bacterial ribosome-binding site. The ligation mixture was used to transform Escherichia coli strain M15/rep4. Transformants were identified by their ability to grow on LB (Luria bertani) plates, and ampicillin/kanamycin-resistant colonies were selected. **Clones** containing the desired constructs were grown overnight in liquid culture, i.e. LB media, supplemented with both ampicillin and kanamycin. Isopropyl-B-D-thiogalacto pyranoside (IPTG) was added to induce gene **expression**. Cells were grown for an extra 3-4 hours, and cells were harvested by centrifugation. The cell pellet obtained by centrifugation was solubilized, and the solubilized BGS-42 protein was purified using a metal chelating column under conditions that allow tight binding of the protein. (343 pages)

L8 ANSWER 15 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 5

ACCESSION NUMBER: 2005:156681 HCAPLUS
Correction of: 2005:60757

DOCUMENT NUMBER: 142:216629
Correction of: 142:132329

TITLE: Gene **expression** profiles and biomarkers for the detection of hyperlipidemia and other disease-related gene transcripts in blood

INVENTOR(S): Liew, Choong-Chin

PATENT ASSIGNEE(S): Chondrogene Limited, Can.

SOURCE: U.S. Pat. Appl. Publ., 155 pp., Cont.-in-part of U.S.

Ser. No. 802,875.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 29
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004248170	A1	20041209	US 2004-812777	20040330
US 2004014059	A1	20040122	US 2002-268730	20021009
US 2005191637	A1	20050901	US 2004-803737	20040318
US 2005196762	A1	20050908	US 2004-803759	20040318
US 2005196763	A1	20050908	US 2004-803857	20040318
US 2005196764	A1	20050908	US 2004-803858	20040318
US 2005208505	A1	20050922	US 2004-803648	20040318
US 2004265869	A1	20041230	US 2004-812716	20040330
PRIORITY APPLN. INFO.:			US 1999-115125P	P 19990106
			US 2000-477148	B1 20000104
			US 2002-268730	A2 20021009
			US 2003-601518	A2 20030620
			US 2004-802875	A2 20040312

AB The present invention is directed to detection and measurement of gene transcripts and their equivalent nucleic acid products in blood. Specifically provided is anal. performed on a drop of blood for detecting, diagnosing, and monitoring diseases, and in particular hyperlipidemia, using gene-specific and/or tissue-specific primers. Affymetrix **Human** Genome U133 and ChondroChip microarrays were used to detect differentially **expressed** gene transcripts in hypertension, obesity, allergy, systemic steroids, coronary artery disease, diabetes type 2, hyperlipidemia, lung disease, bladder cancer, rheumatoid arthritis, osteoarthritis, liver cancer, schizophrenia, Chagas disease, asthma, and manic depression syndrome. The present invention describes methods by which delineation of the sequence and/or quantitation of the **expression** levels of disease-specific genes allows for an immediate and accurate diagnostic/prognostic test for disease or to assess the effect of a particular treatment regimen.

L8 ANSWER 16 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:824055 HCAPLUS
DOCUMENT NUMBER: 141:330185
TITLE: Gene **expression** profiling for diagnosis and treatment of angiogenesis-related disorders
INVENTOR(S): Gonda, Thomas John; Kremmidiotis, Gabriel
PATENT ASSIGNEE(S): Bionomics Limited, Australia
SOURCE: PCT Int. Appl., 148 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004085675	A1	20041007	WO 2004-AU383	20040326

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,

SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

EP 1608778 A1 20051228 EP 2004-723453 20040326
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK

PRIORITY APPLN. INFO.: AU 2003-901511 A 20030328
WO 2004-AU383 W 20040326

AB The present invention provides methods of gene **expression** profiling for diagnosis and treatment of angiogenesis-related disorders. Diseases of the invention include cancer, rhematoid arthritis, diabetic retinopathy, psoriasis, cardiovascular diseases such as atherosclerosis, ischmeic limb disease and coronary heart disease.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 17 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:1997 HCAPLUS
DOCUMENT NUMBER: 142:111841
TITLE: Gene **expression** profiles and biomarkers for the detection of depression-related and other disease-related gene transcripts in blood
INVENTOR(S): Liew, Choong-Chin
PATENT ASSIGNEE(S): Chondrogene Limited, Can.
SOURCE: U.S. Pat. Appl. Publ., 154 pp., Cont.-in-part of U.S. Ser. No. 802,875.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 29
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004265868	A1	20041230	US 2004-812702	20040330
US 2004014059	A1	20040122	US 2002-268730	20021009
US 2005191637	A1	20050901	US 2004-803737	20040318
US 2005196762	A1	20050908	US 2004-803759	20040318
US 2005196763	A1	20050908	US 2004-803857	20040318
US 2005196764	A1	20050908	US 2004-803858	20040318
US 2005208505	A1	20050922	US 2004-803648	20040318
US 2004265869	A1	20041230	US 2004-812716	20040330

PRIORITY APPLN. INFO.: US 1999-115125P P 19990106
US 2000-477148 B1 20000104
US 2002-268730 A2 20021009
US 2003-601518 A2 20030620
US 2004-802875 A2 20040312

AB The present invention is directed to detection and measurement of gene transcripts and their equivalent nucleic acid products in blood. Specifically provided is anal. performed on a drop of blood for detecting, diagnosing, and monitoring diseases, and in particular mental depression, using gene-specific and/or tissue-specific primers. Affymetrix **Human** Genome U133 and ChondroChip microarrays were used to detect differentially **expressed** gene transcripts in hypertension, obesity, allergy, systemic steroids, coronary artery disease, diabetes type 2, hyperlipidemia, lung disease, bladder cancer, rheumatoid arthritis, osteoarthritis, liver cancer, schizophrenia, Chagas disease, asthma, and manic depression syndrome. The present invention describes methods by which delineation of the sequence and/or quantitation of the **expression** levels of disease-specific genes allows for an immediate and accurate diagnostic/prognostic test for disease or to assess the effect of a particular treatment regimen.

L8 ANSWER 18 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:60760 HCAPLUS

Correction of: 2004:1036573
DOCUMENT NUMBER: 142:153477
Correction of: 142:16776
TITLE: Gene **expression** profiles and biomarkers for the detection of Chagas disease and other disease-related gene transcripts in blood
INVENTOR(S): Liew, Choong-Chin
PATENT ASSIGNEE(S): Chondrogene Limited, Can.
SOURCE: U.S. Pat. Appl. Publ., 154 pp., Cont.-in-part of U.S. Ser. No. 802,875.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 29
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
US 2004241729	A1	20041202	US 2004-813097		20040330
US 2004014059	A1	20040122	US 2002-268730		20021009
US 2005191637	A1	20050901	US 2004-803737		20040318
US 2005196762	A1	20050908	US 2004-803759		20040318
US 2005196763	A1	20050908	US 2004-803857		20040318
US 2005196764	A1	20050908	US 2004-803858		20040318
US 2005208505	A1	20050922	US 2004-803648		20040318
US 2004265869	A1	20041230	US 2004-812716		20040330
PRIORITY APPLN. INFO.:			US 1999-115125P	P	19990106
			US 2000-477148	B1	20000104
			US 2002-268730	A2	20021009
			US 2003-601518	A2	20030620
			US 2004-802875	A2	20040312

AB The present invention is directed to detection and measurement of gene transcripts and their equivalent nucleic acid products in blood. Specifically provided is anal. performed on a drop of blood for detecting, diagnosing, and monitoring diseases, and in particular Chagas disease, using gene-specific and/or tissue-specific primers. Affymetrix **Human** Genome U133 and ChondroChip microarrays were used to detect differentially **expressed** gene transcripts in hypertension, obesity, allergy, systemic steroids, coronary artery disease, diabetes type 2, hyperlipidemia, lung disease, bladder cancer, rheumatoid arthritis, osteoarthritis, liver cancer, schizophrenia, Chagas disease, asthma, and manic depression syndrome. The present invention describes methods by which delineation of the sequence and/or quantitation of the **expression** levels of disease-specific genes allows for an immediate and accurate diagnostic/prognostic test for disease or to assess the effect of a particular treatment regimen. [This abstract record is one of 3 records for this document necessitated by the large number of index entries required to fully index the document and publication system constraints.].

L8 ANSWER 19 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:60759 HCAPLUS
Correction of: 2004:1036572
DOCUMENT NUMBER: 142:111840
Correction of: 142:16824
TITLE: Gene **expression** profiles and biomarkers for the detection of lung disease-related and other disease-related gene transcripts in blood
INVENTOR(S): Liew, Choong-Chin
PATENT ASSIGNEE(S): Chondrogene Limited, Can.
SOURCE: U.S. Pat. Appl. Publ., 155 pp., Cont.-in-part of U.S. Ser. No. 802,875.
CODEN: USXXCO
DOCUMENT TYPE: Patent

LANGUAGE: English
FAMILY ACC. NUM. COUNT: 29
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
US 2004241728	A1	20041202	US 2004-812764		20040330
US 2004014059	A1	20040122	US 2002-268730		20021009
US 2005191637	A1	20050901	US 2004-803737		20040318
US 2005196762	A1	20050908	US 2004-803759		20040318
US 2005196763	A1	20050908	US 2004-803857		20040318
US 2005196764	A1	20050908	US 2004-803858		20040318
US 2005208505	A1	20050922	US 2004-803648		20040318
US 2004265869	A1	20041230	US 2004-812716		20040330
PRIORITY APPLN. INFO.:			US 1999-115125P	P	19990106
			US 2000-477148	B1	20000104
			US 2002-268730	A2	20021009
			US 2003-601518	A2	20030620
			US 2004-802875	A2	20040312

AB The present invention is directed to detection and measurement of gene transcripts and their equivalent nucleic acid products in blood. Specifically provided is anal. performed on a drop of blood for detecting, diagnosing and monitoring diseases using gene-specific and/or tissue-specific primers. Affymetrix **Human** Genome U133 and ChondroChip microarrays were used to detect differentially **expressed** gene transcripts in hypertension, obesity, allergy, systemic steroids, coronary artery disease, diabetes type 2, hyperlipidemia, lung disease, bladder cancer, rheumatoid arthritis, osteoarthritis, liver cancer, schizophrenia, Chagas disease, asthma, and manic depression syndrome. The present invention also describes methods by which delineation of the sequence and/or quantitation of the **expression** levels of disease-specific genes allows for an immediate and accurate diagnostic/prognostic test for disease or to assess the effect of a particular treatment regimen.

L8 ANSWER 20 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:60754 HCAPLUS
Correction of: 2004:1036571
DOCUMENT NUMBER: 142:233342
Correction of: 142:16836
TITLE: Sequences of **human** schizophrenia related genes and use for diagnosis, prognosis and therapy
INVENTOR(S): Liew, Choong-Chin
PATENT ASSIGNEE(S): Chondrogene Limited, Can.
SOURCE: U.S. Pat. Appl. Publ., 156 pp., Cont.-in-part of U.S. Ser. No. 802,875.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 29
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
US 2004241727	A1	20041202	US 2004-812731		20040330
US 2004014059	A1	20040122	US 2002-268730		20021009
US 2005191637	A1	20050901	US 2004-803737		20040318
US 2005196762	A1	20050908	US 2004-803759		20040318
US 2005196763	A1	20050908	US 2004-803857		20040318
US 2005196764	A1	20050908	US 2004-803858		20040318
US 2005208505	A1	20050922	US 2004-803648		20040318
US 2004265869	A1	20041230	US 2004-812716		20040330
US 2005208519	A1	20050922	US 2004-989191		20041115
PRIORITY APPLN. INFO.:			US 1999-115125P	P	19990106
			US 2000-477148	B1	20000104

US 2002-268730	A2	20021009
US 2003-601518	A2	20030620
US 2004-802875	A2	20040312
US 2004-812731	A2	20040330
WO 2004-US20836	A2	20040621

AB The present invention is directed to detection and measurement of gene transcripts and their equivalent nucleic acid products in blood. Specifically provided is anal. performed on a drop of blood for detecting, diagnosing and monitoring diseases using gene-specific and/or tissue-specific primers. The present invention also describes methods by which delineation of the sequence and/or quantitation of the **expression** levels of disease-specific genes allows for an immediate and accurate diagnostic/prognostic test for disease or to assess the effect of a particular treatment regimen. [This abstract record is one of 3 records for this document necessitated by the large number of index entries required to fully index the document and publication system constraints.].

L8 ANSWER 21 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:60755 HCAPLUS
Correction of: 2004:1036570

DOCUMENT NUMBER: 142:154259
Correction of: 142:36938

TITLE: Analysis of genetic information contained in peripheral blood for diagnosis, prognosis and monitoring treatment of allergy, infection and genetic disease in **human**

INVENTOR(S): Liew, Choong-Chin

PATENT ASSIGNEE(S): Chondrogene Limited, Can.

SOURCE: U.S. Pat. Appl. Publ., 155 pp., Cont.-in-part of U.S. Ser. No. 802,875.
CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 29

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004241726	A1	20041202	US 2004-812707	20040330
US 2004014059	A1	20040122	US 2002-268730	20021009
US 2005191637	A1	20050901	US 2004-803737	20040318
US 2005196762	A1	20050908	US 2004-803759	20040318
US 2005196763	A1	20050908	US 2004-803857	20040318
US 2005196764	A1	20050908	US 2004-803858	20040318
US 2005208505	A1	20050922	US 2004-803648	20040318
US 2004265869	A1	20041230	US 2004-812716	20040330

PRIORITY APPLN. INFO.:

US 1999-115125P	P	19990106
US 2000-477148	B1	20000104
US 2002-268730	A2	20021009
US 2003-601518	A2	20030620
US 2004-802875	A2	20040312

AB The present invention is directed to detection and measurement of gene transcripts and their equivalent nucleic acid products in blood. Specifically provided is anal. performed on a drop of blood for detecting, diagnosing, and monitoring diseases, and in particular allergy, using gene-specific and/or tissue-specific primers. Affymetrix **Human** Genome U133 and ChondroChip microarrays were used to detect differentially **expressed** gene transcripts in hypertension, obesity, allergy, systemic steroids, coronary artery disease, diabetes type 2, hyperlipidemia, lung disease, bladder cancer, rheumatoid arthritis, osteoarthritis, liver cancer, schizophrenia, Chagas disease, asthma, and manic depression syndrome. The present invention describes methods by which delineation of the sequence and/or quantitation of the **expression** levels of disease-specific genes allows for an

immediate and accurate diagnostic/prognostic test for disease or to assess the effect of a particular treatment regimen. [This abstract record is one of 3 records for this document necessitated by the large number of index entries required to fully index the document and publication system constraints.].

L8 ANSWER 22 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:722839 HCAPLUS
DOCUMENT NUMBER: 141:238811
TITLE: Protein and cDNA sequences of a novel **human** testis-specific tubulin **tyrosine** **ligase** like protein BGS-42, and diagnostic and therapeutic use
INVENTOR(S): Feder, John N.; Nelson, Thomas C.; Wu, Shujian; Krystek, Stanley R.
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 199 pp., Cont.-in-part of U.S. Ser. No. 615,659.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
US 2004171131	A1	20040902	US 2003-635977		20030807
US 2004157234	A1	20040812	US 2003-615659		20030709
PRIORITY APPLN. INFO.:			US 2002-394725P	P	20020709
			US 2003-615659	A2	20030709

AB The present invention provides novel polynucleotides encoding BGS-42 polypeptides, fragments and homologues thereof Also provided are vectors, host cells, antibodies, and **recombinant** and synthetic methods for producing said polypeptides. The invention further relates to diagnostic and therapeutic methods for applying these novel BGS-42 polypeptides to the diagnosis, treatment, and/or prevention of various diseases and/or disorders related to these polypeptides. The invention further relates to screening methods for identifying agonists and antagonists of the polynucleotides and polypeptides of the present invention.

L8 ANSWER 23 OF 45 SCISEARCH COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 2004:405282 SCISEARCH
THE GENUINE ARTICLE: 812TJ
TITLE: Suppression of nuclear oscillations in Saccharomyces cerevisiae **expressing** Glu tubulin
AUTHOR: Badin-Larcon A C; Boscheron C (Reprint); Soleilhac J M; Piel M; Mann C; Denarier E; Fourest-Lieuvin A; Lafanechere L; Bornens M; Job D
CORPORATE SOURCE: CEA Grenoble, DRDC, Lab Cytosquelette, INSERM, U366, 17 Rue Martyrs, F-38054 Grenoble, France (Reprint); CEA Grenoble, DRDC, Lab Cytosquelette, INSERM, U366, F-38054 Grenoble, France; Inst Curie, Sect Rech, CNRS, UMR 144, F-75248 Paris 05, France; CEA Saclay, Serv Biochim & Genet Mol, F-91191 Gif Sur Yvette, France
COUNTRY OF AUTHOR: France
SOURCE: PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, (13 APR 2004) Vol. 101, No. 15, pp. 5577-5582.
ISSN: 0027-8424.
PUBLISHER: NATL ACAD SCIENCES, 2101 CONSTITUTION AVE NW, WASHINGTON, DC 20418 USA.
DOCUMENT TYPE: Article; Journal

LANGUAGE: English
REFERENCE COUNT: 37
ENTRY DATE: Entered STN: 14 May 2004
Last Updated on STN: 14 May 2004
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB In most eukaryotic cells, the C-terminal amino acid of alpha-tubulin is aromatic (Tyr in mammals and Phe in Saccharomyces cerevisiae) and is preceded by two glutamate residues. In mammals, the C-terminal Tyr of alpha-tubulin is subject to cyclic removal from the peptide chain by a carboxypeptidase and readdition to the chain by a tubulin-Tyr ligase. There is evidence that tubulin-Tyr ligase suppression and the resulting accumulation of detyrosinated (Glu) tubulin favor tumor growth, both in animal models and in **human** cancers. However, the molecular basis for this apparent stimulatory effect of Glu tubulin accumulation on tumor progression is unknown. Here we have developed S. cerevisiae strains **expressing** only Glu tubulin and used them as a model to assess the consequences of Glu tubulin accumulation in cells. We find that Glu tubulin strains show defects in nuclear oscillations. These defects are linked to a markedly decreased association of the yeast ortholog of CLIP170, Bik1p, with microtubule plus-ends. These results indicate that the accumulation of Glu tubulin in cells affects microtubule tip complexes that are important for microtubule interactions with the cell cortex.

L8 ANSWER 24 OF 45 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN
ACCESSION NUMBER: 2004290563 EMBASE
TITLE: Proteomic analysis of a ferric uptake regulator mutant of Helicobacter pylori: Regulation of Helicobacter pylori gene **expression** by ferric uptake regulator and iron.
AUTHOR: Lee H.W.; Choe Y.H.; Kim D.K.; Jung S.Y.; Lee N.G.
CORPORATE SOURCE: Dr. N.G. Lee, Dept. of Biosci. and Biotechnology, Sejong University, 98 Kunja-dong, Kwangjin-gu, Seoul 143-747, Korea, Republic of. nglee@sejong.ac.kr
SOURCE: Proteomics, (2004) Vol. 4, No. 7, pp. 2014-2027. .
Refs: 66
ISSN: 1615-9853 CODEN: PROTC7
COUNTRY: Germany
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 004 Microbiology
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 29 Jul 2004
Last Updated on STN: 29 Jul 2004

AB The ferric uptake regulator (Fur) protein is a Fe(2+)-dependent transcriptional repressor that binds to the Fur-box of bacterial promoters and down-regulates gene **expression**. In this study, to investigate global gene regulation by Fur in response to iron in Helicobacterpylori, a causative agent of **human** gastric diseases, we compared the proteome profiles of the H. pylori strain 26695 and its isogenic fur mutant grown under iron-rich and iron-depleted conditions. In total, 93 protein spots were found to be up- or down-regulated by more than 2-fold by either a fur mutation or iron-depletion. From these, 39 spots were identified by matrix-assisted laser desorption/ionization time of flight analysis to be 29 different proteins of diverse functions, including energy metabolism, transcription and translation, detoxification, biosynthesis of amino acids and nucleotides and production of the cell envelope. **Expression** of six proteins was found to be higher in the fur mutant than in the wild-type bacteria, indicating Fur-mediated repression. Eleven proteins were activated by Fur; five responded to iron and the others were not iron-responsive. The remaining 12 proteins were not under Fur-regulation but responded to iron in a positive or negative manner. Seven different types of gene regulation via Fur and iron were identified. These findings demonstrate that the H.

pylori Fur protein functions as a classical transcriptional repressor but can also function as an activator, providing evidence for the presence of Fur-mediated positive regulation in H. pylori.

L8 ANSWER 25 OF 45 MEDLINE on STN
ACCESSION NUMBER: 2005275263 MEDLINE
DOCUMENT NUMBER: PubMed ID: 15577315
TITLE: Class II transactivator (CIITA) isoform **expression** and activity in melanoma.
AUTHOR: Baton Fabrice; Deruyffelaere Carine; Chapin Muriel; Prod'homme Thomas; Charron Dominique; Al-Daccak Reem; Alcaide-Loridan Catherine
CORPORATE SOURCE: INSERM U396, Centre de Recherches Biomedicales des Cordeliers, Paris, France.
SOURCE: Melanoma research, (2004 Dec) Vol. 14, No. 6, pp. 453-61. Journal code: 9109623. ISSN: 0960-8931.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200508
ENTRY DATE: Entered STN: 28 May 2005
Last Updated on STN: 17 Aug 2005
Entered Medline: 16 Aug 2005

AB In contrast with melanocytes, melanomas display constitutive **expression** of HLA-DR (HLA-DR+). This abnormal **expression** has been associated with tumour progression and metastatic dissemination. We have previously reported that this deregulation of HLA-D genes is due to the abnormal constitutive **expression** of the lymphocyte-specific isoform of class II transactivator (B-CIITA), in addition to its fibroblast form (F-CIITA), which is usually **expressed** in major histocompatibility complex (MHC) class II-negative interferon-gamma-induced cell types, such as melanocytes. In this study, we investigated the abnormal **expression** of B-CIITA in a panel of melanoma cell lines displaying differential HLA-DR **expression** profiles, and analysed whether such a molecular event can participate in tumour progression. Our results showed that the abnormal **expression** of B-CIITA did not have any particular effect, in comparison with F-CIITA, on the classical activity of CIITA HLA-D gene regulation. As CIITA has also been shown to regulate genes other than HLA-D, we evaluated the modulation of those encoding cyclin D1, YARS (tyrosyl-tRNA synthetase) and TRIP1 (transforming growth factor (TGF)-beta receptor-interacting protein), proteins involved in cell cycle/apoptosis balance, angiogenesis and resistance to TGF-beta, respectively. In contrast with other cell types, neither B-CIITA nor F-CIITA was able to modulate these genes in melanoma cell lines. Thus, the activity of CIITA, whether lymphocyte-specific or fibroblast-specific, is restricted to HLA-D gene **expression** in these tumours. Accordingly, our data suggest that CIITA is not involved per se in tumour progression; rather, it is the MHC class II molecules themselves, through tumour antigen presentation and the induction of tumour antigen-specific CD4 lymphocyte anergy, that may participate in immune escape and melanoma progression.

L8 ANSWER 26 OF 45 MEDLINE on STN DUPLICATE 6
ACCESSION NUMBER: 2004470309 MEDLINE
DOCUMENT NUMBER: PubMed ID: 15382060
TITLE: Low **expression** of **human** tubulin **tyrosine ligase** and suppressed tubulin tyrosination/detyrosination cycle are associated with impaired neuronal differentiation in neuroblastomas with poor prognosis.
AUTHOR: Kato Chiaki; Miyazaki Kou; Nakagawa Atsuko; Ohira Miki; Nakamura Yohko; Ozaki Toshinori; Imai Toshio; Nakagawara

Akira
CORPORATE SOURCE: Division of Biochemistry, Chiba Cancer Center Research Institute, Chiba, Japan.
SOURCE: International journal of cancer. Journal international du cancer, (2004 Nov 10) Vol. 112, No. 3, pp. 365-75. Journal code: 0042124. ISSN: 0020-7136.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200412
ENTRY DATE: Entered STN: 22 Sep 2004
Last Updated on STN: 19 Dec 2004
Entered Medline: 2 Dec 2004

AB Neuroblastoma (NBL), one of the most common childhood solid tumors, has a distinct nature in different prognostic subgroups. However, the precise mechanism underlying this phenomenon remains largely unknown. To understand the molecular and genetic bases of neuroblastoma, we have generated its cDNA libraries and identified a **human** ortholog of tubulin **tyrosine ligase** gene (hTTL/Nbla0660) as a differentially **expressed** gene at high levels in a favorable subset of the tumor. Tubulin is subjected to several types of evolutionarily conserved posttranslational modification, including tyrosination and detyrosination. Tubulin **tyrosine ligase** catalyzes ligation of the tyrosine residue to the COOH terminus of the detyrosinated form of alpha-tubulin. The measurement of hTTL mRNA **expression** in 74 primary neuroblastomas by quantitative real-time reverse transcription-PCR revealed that its high **expression** was significantly associated with favorable stages (1, 2 and 4s; p = 0.0069), high TrkA **expression** (p = 0.002), a single copy of MYCN (p < 0.00005), tumors found by mass screening (p = 0.0042), nonadrenal origin (p = 0.0042) and good prognosis (p = 0.023). The log-rank test showed that high **expression** of hTTL was an indicator of favorable prognosis (p = 0.026). Immunohistochemical analysis using specific antibodies generated by us demonstrated that tyrosinated tubulin (Tyr-tubulin), detyrosinated tubulin (Glu-tubulin) and hTTL as well as Delta2-tubulin were positive in favorable tumors, whereas only Delta2-tubulin was positive in the tumors with MYCN amplification. In an RTBM1 neuroblastoma cell line, hTTL was increased after treating the cells with bone morphogenetic protein 2 (BMP2) or all-trans retinoic acid (RA), which induced neuronal differentiation. These results suggest that the deregulated tubulin tyrosination/detyrosination cycle caused by decreased **expression** of hTTL is associated with inhibition of neuronal differentiation and enhancement of cell growth in the primary neuroblastomas with poor outcome.

L8 ANSWER 27 OF 45 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:737915 HCAPLUS
DOCUMENT NUMBER: 139:256359
TITLE: **Human** cDNA sequences and their encoded proteins and diagnostic and therapeutic uses
INVENTOR(S): Zerhusen, Bryan D.; Patturajan, Meera; Kekuda, Ramesh; Miller, Charles E.; Rieger, Daniel K.; Pena, Carol E. A.; Shimkets, Richard A.; Li, Li; Berghs, Constance; Zhong, Mei; Casman, Stacie J.; Voss, Edward Z.; Boldog, Ferenc L.; Padigaru, Muralidhara; Smithson, Glennda; Shenoy, Suresh G.; Ji, Weizhen; Gorman, Linda; Vernet, Corine A. M.; Leite, Mario W.; Guo, Xiaojia; Anderson, David W.; Spytek, Kimberly A.; Gerlach, Valerie L.; Burgess, Catherine E.; Khramtsov, Nikolai V.; Ort, Tatiana; Ellerman, Karen; Rastelli, Luca; Agee, Michele L.; Chaudhuri, Amitabha; Chant, John S.; Dipippo, Vincent A.; Edinger, Shlomit; Eisen, Andrew; Gangolli, Esha A.; Giot, Loic; Ooi, Chean Eng;

Rothenberg, Mark E.; Spaderna, Steven K.; Hjalt, Tord; Liu, Xiaohong; Taupier, Raymond J., Jr.; Catterton, Elina
PATENT ASSIGNEE(S): Curagen Corporation, USA
SOURCE: PCT Int. Appl., 562 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 165
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003076642	A2	20030918	WO 2002-US24459	20020802
WO 2003076642	A3	20041014		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2004014053	A1	20040122	US 2002-210130	20020801
CA 2449341	AA	20030918	CA 2002-2449341	20020802
EP 1492807	A2	20050105	EP 2002-806720	20020802
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR, BG, CZ, EE, SK				
JP 2005526507	T2	20050908	JP 2003-574839	20020802
AU 2005200106	A1	20050210	AU 2005-200106	20050112

PRIORITY APPLN. INFO.:

US 2001-309501P	P	20010802
US 2001-310291P	P	20010803
US 2001-310951P	P	20010808
US 2001-311292P	P	20010809
US 2001-311979P	P	20010813
US 2001-312203P	P	20010814
US 2001-313156P	P	20010817
US 2001-313201P	P	20010817
US 2001-313702P	P	20010820
US 2001-314031P	P	20010821
US 2001-314466P	P	20010823
US 2001-315403P	P	20010828
US 2001-315853P	P	20010829
US 2001-316508P	P	20010831
US 2001-323936P	P	20010921
US 2001-338078P	P	20011203
US 2002-354655P	P	20020205
US 2002-361764P	P	20020305
US 2002-373825P	P	20020419
US 2002-380971P	P	20020515
US 2002-380980P	P	20020515
US 2002-381039P	P	20020516
US 2002-383761P	P	20020528
US 2002-383887P	P	20020529
US 2002-210130	A2	20020801
AU 2000-37360	A3	20000309
US 2001-313643P	P	20010820
US 2001-322716P	P	20010917
WO 2002-US24459	W	20020802

AB Disclosed herein are 49 cDNA sequences that encode novel **human** polypeptides that are members of various protein families. Also disclosed are polypeptides encoded by these nucleic acid sequences, and antibodies,

which immunospecifically-bind to the polypeptide, as well as derivs., variants, mutants, or fragments of the aforementioned polypeptide, polynucleotide, or antibody. The invention further discloses therapeutic, diagnostic and research methods for diagnosis, treatment, and prevention of disorders involving any one of these novel **human** nucleic acids and proteins.

L8 ANSWER 28 OF 45 MEDLINE on STN
ACCESSION NUMBER: 2003061672 MEDLINE
DOCUMENT NUMBER: PubMed ID: 12509991
TITLE: **Expression**, purification, and characterization of **human** tyrosyl-tRNA synthetase.
AUTHOR: Jia Jie; Li Bin; Jin Youxin; Wang Debao
CORPORATE SOURCE: State Key Laboratory of Molecular Biology, Institute of Biochemistry and Cell Biology, Shanghai Institutes for Biological Sciences, Chinese Academy of Sciences, 320 Yue-Yang Road, Shanghai 200031, PR China.
SOURCE: Protein expression and purification, (2003 Jan) Vol. 27, No. 1, pp. 104-8.
Journal code: 9101496. ISSN: 1046-5928.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200309
ENTRY DATE: Entered STN: 8 Feb 2003
Last Updated on STN: 3 Sep 2003
Entered Medline: 2 Sep 2003

AB **Human** tyrosyl-tRNA synthetase is a homodimeric enzyme and each subunit is near 58 KD. It catalyzes the aminoacylation of tRNA(Tyr) by L-tyrosine. The His(6)-tagged **human** TyrS gene was obtained by RT-PCR from total RNA of **human** lung giant-cell cancer strain 95 D. It was confirmed by sequencing and **cloned** into the **expression** vector pET-24 a (+) to yield pET-24 a (+)-HTyrRS, which was transfected into Escherichia coli BL21-CodonPlus-RIL. The induced-**expression** level of His(6)-tagged **human** TyrRS was about 24% of total cell proteins under IPTG inducing. The **recombinant** protein was conveniently purified in a single step by metal (Ni(2+)) chelate affinity chromatography. About 22.3mg purified enzyme could be obtained from 1L cell culture. The k(cat) value of His(6)-tagged **human** TyrRS in the second step of tRNA(Tyr) aminoacylation was 1.49 s(-1). The K(m) values of tyrosine and tRNA(Tyr) were 0.3 and 0.9 microM. Six His residues at the C terminus of **human** TyrRS have little effect on the activities of the enzyme compared with other eukaryotic TyrRSs.

L8 ANSWER 29 OF 45 MEDLINE on STN DUPLICATE 7
ACCESSION NUMBER: 2003493733 MEDLINE
DOCUMENT NUMBER: PubMed ID: 14571137
TITLE: **Cloning** and genomic organization of the TTL gene on mouse chromosome 2 and **human** chromosome 2q13.
AUTHOR: Erck C; MacLeod R A F; Wehland J
CORPORATE SOURCE: Department of Cell Biology, German Research Center of Biotechnology, Braunschweig, Germany.. cer@gbf.de
SOURCE: Cytogenetic and genome research, (2003) Vol. 101, No. 1, pp. 47-53.
Journal code: 101142708. E-ISSN: 1424-859X.
PUB. COUNTRY: Switzerland
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200403
ENTRY DATE: Entered STN: 23 Oct 2003
Last Updated on STN: 16 Mar 2004

Entered Medline: 15 Mar 2004

AB Tubulin **tyrosine ligase** (TTL) is a cytosolic enzyme involved in the posttranslational modification of tubulin. In the assembled form microtubules are detyrosinated over time at the C-terminus of alpha-tubulin. After microtubular disassembly TTL restores tyrosine residues back to the detyrosinated tubulin leading to a cycle of detyrosination/tyrosination. Here we report the isolation of the **human** and mouse TTL cDNA. In comparison with other known TTL sequences, namely bovine, rat and porcine, we found that only porcine TTL deviates in length by having an insertion of two glutamate residues. In mouse and **human** TTL the genomic coding sequence is composed of seven exons with normal intron/exon boundaries. Using fluorescence in situ hybridization (FISH), we mapped the murine TTL gene to mouse chromosome 2 (MMU2). **Human** TTL has been located to chromosome 2q13 (HSA2q13). In addition, we found frequently truncated PCR products of hTTL transcripts with aberrant splicing in tumors.
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L8 ANSWER 30 OF 45 MEDLINE on STN DUPLICATE 8
ACCESSION NUMBER: 2002301171 MEDLINE
DOCUMENT NUMBER: PubMed ID: 11956181
TITLE: Induction of angiogenesis by a fragment of **human** tyrosyl-tRNA synthetase.
AUTHOR: Wakasugi Keisuke; Slike Bonnie M; Hood John; Ewalt Karla L; Cheresh David A; Schimmel Paul
CORPORATE SOURCE: Skaggs Institute for Chemical Biology and Department of Chemistry, The Scripps Research Institute, La Jolla, California 92037, USA.
CONTRACT NUMBER: CA92577 (NCI)
GM23562 (NIGMS)
SOURCE: The Journal of biological chemistry, (2002 Jun 7) Vol. 277, No. 23, pp. 20124-6. Electronic Publication: 2002-04-15. Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200207
ENTRY DATE: Entered STN: 4 Jun 2002
Last Updated on STN: 5 Jan 2003
Entered Medline: 12 Jul 2002

AB The first step of protein synthesis is catalyzed by aminoacyl-tRNA synthetases. In addition, certain mammalian tRNA synthetases link protein synthesis to cytokine signaling pathways. In particular, **human** tyrosyl-tRNA synthetase (TyrRS) can be split by proteolysis into two fragments having distinct cytokine activities. One of the TyrRS fragments (mini TyrRS) contains features identical to those in CXC chemokines (like interleukin-8) that also act as angiogenic factors. Here mini TyrRS (but not full-length TyrRS) is shown to stimulate chemotaxis of endothelial cells in vitro and stimulate angiogenesis in each of two in vivo animal models. The angiogenic activity of mini TyrRS can be opposed by anti-angiogenic chemokines like IP-10. Thus, a biological fragment of **human** tyrosyl-tRNA synthetase links protein synthesis to regulation of angiogenesis.

L8 ANSWER 31 OF 45 MEDLINE on STN
ACCESSION NUMBER: 2002229799 MEDLINE
DOCUMENT NUMBER: PubMed ID: 11856731
TITLE: Catalysis of tyrosyl-adenylate formation by the **human** tyrosyl-tRNA synthetase.
AUTHOR: Austin Joseph; First Eric A
CORPORATE SOURCE: Department of Biochemistry and Molecular Biology, Louisiana State University Health Sciences Center in Shreveport, Shreveport, Louisiana 71130, USA.

CONTRACT NUMBER: GM53693 (NIGMS)
SOURCE: The Journal of biological chemistry, (2002 Apr 26) Vol. 277, No. 17, pp. 14812-20. Electronic Publication: 2002-02-20.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200205
ENTRY DATE: Entered STN: 23 Apr 2002
Last Updated on STN: 5 Jan 2003
Entered Medline: 31 May 2002

AB Although the active site residues in the Bacillus stearothermophilus and **human** tyrosyl-tRNA synthetases are largely conserved, several differences exist between the two enzymes. In particular, three amino acids that stabilize the transition state for the activation of tyrosine in B. stearothermophilus tyrosyl-tRNA synthetase (Cys-35, His-48, and Lys-233) are not present in the **human** enzyme. This raises the question of whether the activation energy for the tyrosine activation step is higher for the **human** tyrosyl-tRNA synthetase than for the B. stearothermophilus enzyme. In this paper, we demonstrate that intrinsic fluorescence changes can be used to monitor the pre-steady state kinetics of **human** tyrosyl-tRNA synthetase. In contrast to the B. stearothermophilus enzyme, catalysis of the tyrosine activation step is potassium-dependent in the **human** tyrosyl-tRNA synthetase. Specifically, potassium increases the forward rate constant for tyrosine activation 260-fold in the **human** tyrosyl-tRNA synthetase. Comparison of the forward rate constants for catalysis of tyrosine activation by the **human** and B. stearothermophilus enzymes indicates that despite differences in their active sites and the potassium requirement of the **human** enzyme, the activation energies for tyrosine activation are identical for the two enzymes. The results of these investigations suggest that differences exist between the active sites of the bacterial and **human** tyrosyl-tRNA synthetases that could be exploited to design antimicrobials that target the bacterial enzyme.

L8 ANSWER 32 OF 45 MEDLINE on STN
ACCESSION NUMBER: 2002689767 MEDLINE
DOCUMENT NUMBER: PubMed ID: 12450387
TITLE: Mutational switching of a yeast tRNA synthetase into a mammalian-like synthetase cytokine.
AUTHOR: Liu Jianming; Yang Xiang-Lei; Ewalt Karla L; Schimmel Paul
CORPORATE SOURCE: The Skaggs Institute for Chemical Biology and the Department of Molecular Biology, The Scripps Research Institute, 10550 North Torrey Pines Road, BCC-379, La Jolla, California 92037, USA.
CONTRACT NUMBER: CA92577 (NCI)
SOURCE: Biochemistry, (2002 Dec 3) Vol. 41, No. 48, pp. 14232-7.
Journal code: 0370623. ISSN: 0006-2960.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200301
ENTRY DATE: Entered STN: 14 Dec 2002
Last Updated on STN: 11 Jan 2003
Entered Medline: 10 Jan 2003

AB Aminoacyl-tRNA synthetases catalyze the attachment of amino acids to their cognate tRNAs. A link was recently established between protein biosynthesis and cytokine signal transduction. **Human** tyrosyl-tRNA synthetase can be split into two fragments, each of which has a distinct cytokine function. This activity is specific to the

human enzyme. It is absent in the enzymes from lower organisms such as bacteria and yeast. Here, yeast tyrosyl-tRNA synthetase (TyrRS), which lacks cytokine activity, was used as a model to explore how a **human** tyrosyl-tRNA synthetase during evolution acquired novel functions beyond aminoacylation. We found that a rationally designed mutant yeast TyrRS(ELR) gained cytokine function. The mutant yeast enzyme gained this function without sacrifice of aminoacylation activity. Therefore, relatively simple alteration of a basic structural motif imparts cytokine activity to a tRNA synthetase while preserving its canonical function. Further work established that mutational switching of a yeast protein to a mammalian-like cytokine was specific to this synthetase and not to just any yeast ortholog of a mammalian cytokine.

L8 ANSWER 33 OF 45 MEDLINE on STN DUPLICATE 9
ACCESSION NUMBER: 2002665685 MEDLINE
DOCUMENT NUMBER: PubMed ID: 12409460
TITLE: Site-specific incorporation of an unnatural amino acid into proteins in mammalian cells.
AUTHOR: Sakamoto Kensaku; Hayashi Akiko; Sakamoto Ayako; Kiga Daisuke; Nakayama Hiroshi; Soma Akiko; Kobayashi Takatsugu; Kitabatake Makoto; Takio Koji; Saito Kazuki; Shirouzu Mikako; Hirao Ichiro; Yokoyama Shigeyuki
CORPORATE SOURCE: Department of Biophysics and Biochemistry, Graduate School of Science, University of Tokyo, 7-3-1 Hongo, Bunkyo-ku, Tokyo 113-0033, Japan.
SOURCE: Nucleic acids research, (2002 Nov 1) Vol. 30, No. 21, pp. 4692-9.
Journal code: 0411011. E-ISSN: 1362-4962.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200211
ENTRY DATE: Entered STN: 13 Nov 2002
Last Updated on STN: 12 Dec 2002
Entered Medline: 25 Nov 2002
AB A suppressor tRNA(Tyr) and mutant tyrosyl-tRNA synthetase (TyrRS) pair was developed to incorporate 3-iodo-L-tyrosine into proteins in mammalian cells. First, the Escherichia coli suppressor tRNA(Tyr) gene was mutated, at three positions in the D arm, to generate the internal promoter for **expression**. However, this tRNA, together with the cognate TyrRS, failed to exhibit suppressor activity in mammalian cells. Then, we found that amber suppression can occur with the heterologous pair of E.coli TyrRS and Bacillus stearothermophilus suppressor tRNA(Tyr), which naturally contains the promoter sequence. Furthermore, the efficiency of this suppression was significantly improved when the suppressor tRNA was **expressed** from a gene cluster, in which the tRNA gene was tandemly repeated nine times in the same direction. For incorporation of 3-iodo-L-tyrosine, its specific E.coli TyrRS variant, TyrRS(V37C195), which we recently created, was **expressed** in mammalian cells, together with the B.stearothermophilus suppressor tRNA(Tyr), while 3-iodo-L-tyrosine was supplied in the growth medium. 3-Iodo-L-tyrosine was thus incorporated into the proteins at amber positions, with an occupancy of >95%. Finally, we demonstrated conditional 3-iodo-L-tyrosine incorporation, regulated by inducible **expression** of the TyrRS(V37C195) gene from a tetracycline-regulated promoter.

L8 ANSWER 34 OF 45 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN
ACCESSION NUMBER: 2002026029 EMBASE
TITLE: A fragment of **human** TrpRS as a potent antagonist of ocular angiogenesis.
AUTHOR: Otani A.; Slike B.M.; Dorrell M.I.; Hood J.; Kinder K.; Ewalt K.L.; Cheresh D.; Schimmel P.; Friedlander M.

CORPORATE SOURCE: P. Schimmel, Skaggs Inst. for Chemical Biology, Department of Molecular Biology, Scripps Research Institute, San Diego, CA 92037, United States. schimmel@scripps.edu
SOURCE: Proceedings of the National Academy of Sciences of the United States of America, (8 Jan 2002) Vol. 99, No. 1, pp. 178-183. .
Refs: 56
ISSN: 0027-8424 CODEN: PNASA6
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 31 Jan 2002
Last Updated on STN: 31 Jan 2002

AB Pathological angiogenesis contributes directly to profound loss of vision associated with many diseases of the eye. Recent work suggests that **human** tyrosyl- and tryptophanyl-tRNA synthetases (TrpRS) link protein synthesis to signal transduction pathways including angiogenesis. In this study, we show that a **recombinant** form of a COOH-terminal fragment of TrpRS is a potent antagonist of vascular endothelial growth factor-induced angiogenesis in a mouse model and of naturally occurring retinal angiogenesis in the neonatal mouse. The angiostatic activity is dose-dependent in both systems. The **recombinant** fragment is similar in size to one generated naturally by alternative splicing and can be produced by proteolysis of the full-length protein. In contrast, the full-length protein is inactive as an antagonist of angiogenesis. These results suggest that fragments of TrpRS, as naturally occurring and potentially nonimmunogenic anti-angiogenics, can be used for the treatment of neovascular eye diseases.

L8 ANSWER 35 OF 45 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN DUPLICATE 10
ACCESSION NUMBER: 2001099842 EMBASE
TITLE: Twenty-first aminoacyl-tRNA synthetase-suppressor tRNA pairs for possible use in site-specific incorporation of amino acid analogues into proteins in eukaryotes and in eubacteria.
AUTHOR: Kowal A.K.; Kohrer C.; RajBhandary U.L.
CORPORATE SOURCE: U.L. RajBhandary, Department of Biology, Massachusetts Institute of Technol., Cambridge, MA 02139, United States. bhandary@mit.edu
SOURCE: Proceedings of the National Academy of Sciences of the United States of America, (27 Feb 2001) Vol. 98, No. 5, pp. 2268-2273. .
Refs: 45
ISSN: 0027-8424 CODEN: PNASA6
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 004 Microbiology
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 12 Apr 2001
Last Updated on STN: 12 Apr 2001

AB Two critical requirements for developing methods for the site-specific incorporation of amino acid analogues into proteins in vivo are (i) a suppressor tRNA that is not aminoacylated by any of the endogenous aminoacyl-tRNA synthetases (aaRSs) and (ii) an aminoacyl-tRNA synthetase that aminoacylates the suppressor tRNA but no other tRNA in the cell. Here we describe two such aaRS-suppressor tRNA pairs, one for use in the yeast Saccharomyces cerevisiae and another for use in Escherichia coli. The "21st synthetase-tRNA pairs" include E. coli glutaminyl-tRNA synthetase (GlnRS) along with an amber suppressor derived from

human initiator tRNA, for use in yeast, and mutants of the yeast tyrosyl-tRNA synthetase (TyrRS) along with an amber suppressor derived from E. coli initiator tRNA, for use in E. coli. The suppressor tRNAs are aminoacylated in vivo only in the presence of the heterologous aaRSs, and the aminoacylated tRNAs function efficiently in suppression of amber codons. Plasmids carrying the E. coli GlnRS gene can be stably maintained in yeast. However, plasmids carrying the yeast TyrRS gene could not be stably maintained in E. coli. This lack of stability is most likely due to the fact that the wild-type yeast TyrRS misaminoacylates the E. coli proline tRNA. By using error-prone PCR, we have isolated and characterized three mutants of yeast TyrRS, which can be stably expressed in E. coli. These mutants still aminoacylate the suppressor tRNA essentially quantitatively in vivo but show increased discrimination in vitro for the suppressor tRNA over the E. coli proline tRNA by factors of 2.2- to 6.8-fold.

L8 ANSWER 36 OF 45 MEDLINE on STN
ACCESSION NUMBER: 2001275783 MEDLINE
DOCUMENT NUMBER: PubMed ID: 11359929
TITLE: Role of nuclear pools of aminoacyl-tRNA synthetases in tRNA nuclear export.
AUTHOR: Azad A K; Stanford D R; Sarkar S; Hopper A K
CORPORATE SOURCE: Department of Biochemistry and Molecular Biology, Pennsylvania State University College of Medicine, Hershey, Pennsylvania 17033, USA.
SOURCE: Molecular biology of the cell, (2001 May) Vol. 12, No. 5, pp. 1381-92.
Journal code: 9201390. ISSN: 1059-1524.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200109
ENTRY DATE: Entered STN: 17 Sep 2001
Last Updated on STN: 17 Sep 2001
Entered Medline: 13 Sep 2001

AB Reports of nuclear tRNA aminoacylation and its role in tRNA nuclear export (Lund and Dahlberg, 1998; Sarkar et al., 1999; Grosshans et al., 20001) have led to the prediction that there should be nuclear pools of aminoacyl-tRNA synthetases. We report that in budding yeast there are nuclear pools of tyrosyl-tRNA synthetase, Tys1p. By sequence alignments we predicted a Tys1p nuclear localization sequence and showed it to be sufficient for nuclear location of a passenger protein. Mutations of this nuclear localization sequence in endogenous Tys1p reduce nuclear Tys1p pools, indicating that the motif is also important for nucleus location. The mutations do not significantly affect catalytic activity, but they do cause defects in export of tRNAs to the cytosol. Despite export defects, the cells are viable, indicating that nuclear tRNA aminoacylation is not required for all tRNA nuclear export paths. Because the tRNA nuclear exportin, Los1p, is also unessential, we tested whether tRNA aminoacylation and Los1p operate in alternative tRNA nuclear export paths. No genetic interactions between aminoacyl-tRNA synthetases and Los1p were detected, indicating that tRNA nuclear aminoacylation and Los1p operate in the same export pathway or there are more than two pathways for tRNA nuclear export.

L8 ANSWER 37 OF 45 MEDLINE on STN DUPLICATE 11
ACCESSION NUMBER: 2001070000 MEDLINE
DOCUMENT NUMBER: PubMed ID: 11054573
TITLE: Characterization of the human tubulin tyrosine ligase-like 1 gene (TTLL1) mapping to 22q13.1.
AUTHOR: Trichet V; Ruault M; Roizes G; De Sario A
CORPORATE SOURCE: Sequences Repetees et Centromeres Humains, CNRS UPR 1142,

Institut de Biologie, 4, bv Henri IV, 34060, Montpellier, France.
SOURCE: Gene, (2000 Oct 17) Vol. 257, No. 1, pp. 109-17.
Journal code: 7706761. ISSN: 0378-1119.
PUB. COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-AF104927; GENBANK-AF173935
ENTRY MONTH: 200101
ENTRY DATE: Entered STN: 22 Mar 2001
Last Updated on STN: 22 Mar 2001
Entered Medline: 4 Jan 2001

AB This paper reports the characterization of the **human** tubulin **tyrosine ligase**-like 1 gene (TTLL1), which maps to the chromosome region 22q13.1 and has been partially duplicated on three other acrocentric chromosomes: 13, 15 and 21. We describe the complete cDNA, TTLL1a, coding for the putative 423 amino acid long TTLL1 and alternative transcripts coding for truncated TTLL1. Likely TTLL1a corresponds to the 1.8 kb transcript that was detected in a wide range of tissues and has a stronger **expression** in heart, brain and testis. A 4.8 kb transcript was found only in brain tissues. We present an interspecies sequence comparison, revealing three conserved domains, named TTLD1, TTLD2 and TTLD3, that are specific to the TTLs and TTL-like proteins.

L8 ANSWER 38 OF 45 MEDLINE on STN
ACCESSION NUMBER: 2000148025 MEDLINE
DOCUMENT NUMBER: PubMed ID: 10685598
TITLE: Tubulin-**tyrosine ligase**, a long-lasting enigma.
AUTHOR: Erck C; Frank R; Wehland J
CORPORATE SOURCE: Abteilung Zellbiologie, Gesellschaft fuer Biotechnologische Forschung, Braunschweig, Germany.
SOURCE: Neurochemical research, (2000 Jan) Vol. 25, No. 1, pp. 5-10. Ref: 48
Journal code: 7613461. ISSN: 0364-3190.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200003
ENTRY DATE: Entered STN: 20 Mar 2000
Last Updated on STN: 20 Mar 2000
Entered Medline: 9 Mar 2000

AB Tubulins and microtubules are subjected to several post-translational modifications of which the reversible detyrosination/tyrosination of the carboxy-terminal end of most alpha-tubulins has been extensively analysed. This modification cycle involves a specific carboxypeptidase and the activity of the tubulin-**tyrosine ligase** (TTL). The true physiological function of TTL has so far not been established. This review describes the purification of TTL to homogeneity by biochemical methods, its in vitro properties and the generation of monoclonal antibodies. These mabs not only enabled a very convenient and rapid purification of TTL by immunoaffinity chromatography but also its extensive characterization by protein sequencing, which led to the isolation of the full length cDNA. With this information, gene disruption should be feasible in order to determine the physiological significance of the tyrosination cycle.

L8 ANSWER 39 OF 45 MEDLINE on STN
ACCESSION NUMBER: 1999203717 MEDLINE
DOCUMENT NUMBER: PubMed ID: 10102815
TITLE: Two distinct cytokines released from a **human**

aminoacyl-tRNA synthetase.
AUTHOR: Wakasugi K; Schimmel P
CORPORATE SOURCE: The Skaggs Institute for Chemical Biology, The Scripps Research Institute, Beckman Center, 10550 North Torrey Pines Road, La Jolla, CA 92037, USA.
CONTRACT NUMBER: GM23562 (NIGMS)
SOURCE: Science, (1999 Apr 2) Vol. 284, No. 5411, pp. 147-51. Journal code: 0404511. ISSN: 0036-8075.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199904
ENTRY DATE: Entered STN: 4 May 1999
Last Updated on STN: 4 May 1999
Entered Medline: 22 Apr 1999

AB Aminoacyl-tRNA synthetases catalyze aminoacylation of transfer RNAs (tRNAs). It is shown that **human** tyrosyl-tRNA synthetase can be split into two fragments with distinct cytokine activities. The endothelial monocyte-activating polypeptide II-like carboxy-terminal domain has potent leukocyte and monocyte chemotaxis activity and stimulates production of myeloperoxidase, tumor necrosis factor-alpha, and tissue factor. The catalytic amino-terminal domain binds to the interleukin-8 type A receptor and functions as an interleukin-8-like cytokine. Under apoptotic conditions in cell culture, the full-length enzyme is secreted, and the two cytokine activities can be generated by leukocyte elastase, an extracellular protease. Secretion of this tRNA synthetase may contribute to apoptosis both by arresting translation and producing needed cytokines.

L8 ANSWER 40 OF 45 MEDLINE on STN
ACCESSION NUMBER: 2000131861 MEDLINE
DOCUMENT NUMBER: PubMed ID: 10667209
TITLE: Azatyrosine. Mechanism of action for conversion of transformed phenotype to normal.
AUTHOR: Monden Y; Hamano Takaku F; Shindo Okada N; Nishimura S
CORPORATE SOURCE: Banyu Tsukuba Research Institute, Ibaraki, Japan.
SOURCE: Annals of the New York Academy of Sciences, (1999) Vol. 886, pp. 109-21. Ref: 42
Journal code: 7506858. ISSN: 0077-8923.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200002
ENTRY DATE: Entered STN: 14 Mar 2000
Last Updated on STN: 14 Mar 2000
Entered Medline: 29 Feb 2000

AB Azatyrosine [L-beta-(5-hydroxy-2-pyridyl)-alanine] has the unique property of converting ras- or c-erbB-2 transformed phenotype to normal. The administration of azatyrosine also inhibits tumor formation in transgenic mice harboring the normal **human** c-Ha-ras which is mutated during treatment with various chemical carcinogens. To elucidate the molecular mechanism, we investigated how azatyrosine functions and what are its major targets. Azatyrosine functions downstream of ras; azatyrosine does not alter either the level of GTP-bound Ras or the total amount of Ras. Instead, azatyrosine inhibits the activation of c-Raf-1 kinase by oncogenic c-ErbB-2, resulting in inactivation of AP1. It is interesting that azatyrosine also restores the **expression** of the rhoB gene, the product of which regulates the formation of actin stress fibers. Azatyrosine is incorporated into cellular proteins to replace tyrosine. Several experiments indicate that replacement of tyrosine is likely to be a cause for its conversion of transformed phenotype to normal. To prove

this hypothesis, we are attempting to develop a mutant of tyrosyl-tRNA synthetase that, unlike wild type, can aminoacylate azatyrosine more efficiently than can tyrosine.

L8 ANSWER 41 OF 45 LIFESCI COPYRIGHT 2006 CSA on STN
ACCESSION NUMBER: 1999:46249 LIFESCI
TITLE: A deadly double life
AUTHOR: Weiner, A.M.; Maizels, N.
CORPORATE SOURCE: Dep. Mol. Biophys. and Biochem., and Genet., Yale Univ. Sch. Med., New Haven, CT 06520-8024, USA; E-mail: weiner@biomed.med.yale.edu
SOURCE: Science (Washington) [Science (Wash.)], (19990402) vol. 284, no. 5411, pp. 63-64.
ISSN: 0036-8075.
DOCUMENT TYPE: Journal
TREATMENT CODE: General Review
FILE SEGMENT: N; F
LANGUAGE: English
AB Two years ago, the groups of Eduard Hurt at the University of Heidelberg and Eric First at Louisiana State University made the remarkable discovery that the carboxyl-terminal domain of **human** tyrosyl-transfer RNA synthetase--the enzyme that catalyzes covalent attachment of the amino acid tyrosine to the corresponding tRNA molecule in preparation for protein synthesis--has extensive amino acid sequence homology (49% identity) with a cytokine. The cytokine in question, endothelial monocyte-activating polypeptide II (EMAPII), activates endothelial cells to **express** tissue factor and surface adhesion molecules, and stimulates phagocytic cells to **express** tissue factor and tumor necrosis factor- alpha (TNF- alpha), and to migrate to sites of inflammation. Does **human** tyrosyl-tRNA synthetase lead a double life as the cytokine EMAPII? Apparently so, as Wakasugi and Schimmel report on page 147 of this issue. They show that **human** tyrosyl-tRNA synthetase is secreted as cells undergo programmed cell death (apoptosis) and is cleaved into not one but two cytokines. These investigators demonstrate thay tyrosyl-tRNA synthetase, which normally resides in the cell cytoplasm, is secreted by a re-transformed **human** hematopoietic cell line that was forced to undergo apoptosis by serum deprivation. Secretion of tyrosyl-tRNA synthetase is specific; other tRNA synthetases cannot be detected in supernatants derived from these apoptotic cells. The secreted tyrosyl-tRNA synthetase is full length and inactivate but, like many other cytokines, it becomes activated after cleavage into two fragments by extracellular proteases.

L8 ANSWER 42 OF 45 MEDLINE on STN DUPLICATE 12
ACCESSION NUMBER: 1998070560 MEDLINE
DOCUMENT NUMBER: PubMed ID: 9405300
TITLE: Suppression of tubulin **tyrosine ligase** during tumor growth.
AUTHOR: Lafanechere L; Courtay-Cahen C; Kawakami T; Jacrot M; Rudiger M; Wehland J; Job D; Margolis R L
CORPORATE SOURCE: Laboratoire du Cytosquelette, INSERM U366, DBMS, Commisariat a l'Energie Atomique/Grenoble, Grenoble, France.
SOURCE: Journal of cell science, (1998 Jan) Vol. 111 (Pt 2), pp. 171-81.
Journal code: 0052457. ISSN: 0021-9533.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199803
ENTRY DATE: Entered STN: 26 Mar 1998
Last Updated on STN: 26 Mar 1998
Entered Medline: 17 Mar 1998

AB The C terminus of the tubulin alpha-subunit of most eukaryotic cells undergoes a cycle of tyrosination and detyrosination using two specific enzymes, a tubulin **tyrosine ligase** (TTL) and a tubulin carboxypeptidase. Although this enzyme cycle is conserved in evolution and exhibits rapid turnover, the meaning of this modification has remained elusive. We have isolated several NIH-3T3 derived **clonal** cell lines that lack TTL (TTL-). TTL- cells contain a unique tubulin isotype (delta2-tubulin) that can be detected with specific antibodies. When injected into nude mice, both TTL- cells and TTL- cells stably transfected with TTL cDNA form sarcomas. But in tumors formed from TTL rescued cells, TTL is systematically lost during tumor growth. A strong selection process has thus acted during tumor growth to suppress TTL activity. In accord with this result, we find suppression of TTL activity in the majority of **human** tumors assayed with delta2-tubulin antibody. We conclude there is a widespread loss of TTL activity during tumor growth in situ, suggesting that TTL activity may play a role in tumor cell regulation.

L8 ANSWER 43 OF 45 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN DUPLICATE 13

ACCESSION NUMBER: 97166125 EMBASE
DOCUMENT NUMBER: 1997166125
TITLE: **Human** tyrosyl-tRNA synthetase shares amino acid sequence homology with a putative cytokine.
AUTHOR: Kleeman T.A.; Wei D.; Simpson K.L.; First E.A.
CORPORATE SOURCE: E.A. First, Biochemistry/Molecular Biol. Dept., Louisiana State Univ. Med. Center, Shreveport, LA 71130-3932, United States. efirst@lsumc.edu
SOURCE: Journal of Biological Chemistry, (1997) Vol. 272, No. 22, pp. 14420-14425. .
Refs: 65
ISSN: 0021-9258 CODEN: JBCHA3
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 25 Jun 1997
Last Updated on STN: 25 Jun 1997

AB To test the hypothesis that tBNA(Tyr) recognition differs between bacterial and **human** tyrosyl-tRNA synthetases, we sequenced several **clones** identified as **human** tyrosyl-tRNA synthetase cDNAs by the **Human** Genome Project. We found that **human** tyrosyl-tRNA synthetase is composed of three domains: 1) an amino-terminal Rossmann fold domain that is responsible for formation of the activated E·Tyr-AMP intermediate and is conserved among bacteria, archeae, and eukaryotes; 2) a tRNA anticodon recognition domain that has not been conserved between bacteria and eukaryotes; and 3) a carboxyl-terminal domain that is unique to the **human** tyrosyl-tRNA synthetase and whose primary structure is 49% identical to the putative **human** cytokine endothelial monocyte-activating protein II, 50% identical to the carboxyl- terminal domain of methionyl-tRNA synthetase from Caenorhabditis elegans, and 43% identical to the carboxyl-terminal domain of Arc1p from Saccharomyces cerevisiae. The first two domains of the **human** tyrosyl-tRNA synthetase are 52, 36, and 16% identical to tyrosyl-tRNA synthetases from S. cerevisiae, Methanococcus jannaschii, and Bacillus stearothermophilus, respectively. Nine of fifteen amino acids known to be involved in the formation of the tyrosyl- adenylate complex in B. stearothermophilus are conserved across all of the organisms, whereas amino acids involved in the recognition of tRNA(Tyr) are not conserved. Kinetic analyses of **recombinant** **human** and B. stearothermophilus tyrosyl-tRNA synthetases **expressed** in Escherichia coli indicate that **human** tyrosyl-tRNA synthetase aminoacylates **human** but not B.

stearothermophilus tRNA(Tyr), and vice versa, supporting the original hypothesis. It is proposed that like endothelial monocyte-activating protein II and the carboxyl-terminal domain of Arc1p, the carboxyl-terminal domain of **human** tyrosyl-tRNA synthetase evolved from gene duplication of the carboxyl- terminal domain of methionyl-tRNA synthetase and may direct tRNA to the active site of the enzyme.

L8 ANSWER 44 OF 45 MEDLINE on STN DUPLICATE 14
ACCESSION NUMBER: 97234553 MEDLINE
DOCUMENT NUMBER: PubMed ID: 9118990
TITLE: Tubulin post-translational modifications--enzymes and their mechanisms of action.
AUTHOR: MacRae T H
CORPORATE SOURCE: Department of Biology, Dalhousie University, Halifax, Canada.
SOURCE: European journal of biochemistry / FEBS, (1997 Mar 1) Vol. 244, No. 2, pp. 265-78. Ref: 172
Journal code: 0107600. ISSN: 0014-2956.
PUB. COUNTRY: GERMANY: Germany, Federal Republic of
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199704
ENTRY DATE: Entered STN: 6 May 1997
Last Updated on STN: 3 Mar 2000
Entered Medline: 22 Apr 1997

AB This review describes the enzymes responsible for the post-translational modifications of tubulin, including detyrosination/tyrosination, acetylation/deacetylation, phosphorylation, polyglutamylation, polyglycylation and the generation of non-tyrosinatable alpha-tubulin. Tubulin **tyrosine-ligase**, which reattaches tyrosine to detyrosinated tubulin, has been extensively characterized and its gene sequenced. Enzymes such as tubulin-specific carboxypeptidase and alpha-tubulin acetyltransferase, required, respectively, for detyrosination and acetylation of tubulin, have yet to be purified to homogeneity and examined in defined systems. This has produced some conflicting results, especially for the carboxypeptidase. The phosphorylation of tubulin by several different types of kinases has been studied in detail but drawing conclusions is difficult because many of these enzymes modify proteins other than their actual substrates, an especially pertinent consideration for in vitro experiments. Tubulin phosphorylation in cultured neuronal cells has proven to be the best model for evaluation of kinase effects on tubulin/microtubule function. There is little information on the enzymes required for polyglutamylation, polyglycylation, and production of non-tyrosinatable tubulin, but the available data permit interesting speculation of a mechanistic nature. Clearly, to achieve a full appreciation of tubulin post-translational changes the responsible enzymes must be characterized. Knowing when the enzymes are active in cells, if soluble or polymerized tubulin is the preferred substrate and the amino acid residues modified by each enzyme are all important. Moreover, acquisition of purified enzymes will lead to **cloning** and sequencing of their genes. With this information, one can manipulate cell genomes in order to either modify key enzymes or change their relative amounts, and perhaps reveal the physiological significance of tubulin post-translational modifications.

L8 ANSWER 45 OF 45 MEDLINE on STN
ACCESSION NUMBER: 93286133 MEDLINE
DOCUMENT NUMBER: PubMed ID: 8509419
TITLE: Saccharomyces cerevisiae cytoplasmic tyrosyl-tRNA synthetase gene. Isolation by complementation of a mutant Escherichia coli suppressor tRNA defective in

aminoacylation and sequence analysis.
AUTHOR: Chow C M; RajBhandary U L
CORPORATE SOURCE: Department of Biology, Massachusetts Institute of Technology, Cambridge 02139.
CONTRACT NUMBER: GM17151 (NIGMS)
SOURCE: The Journal of biological chemistry, (1993 Jun 15) Vol. 268, No. 17, pp. 12855-63.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-L12221; GENBANK-L12222; GENBANK-L12223
ENTRY MONTH: 199307
ENTRY DATE: Entered STN: 23 Jul 1993
Last Updated on STN: 6 Feb 1998
Entered Medline: 13 Jul 1993

AB Exploiting differences in tRNA recognition between prokaryotic and eukaryotic tyrosyl-tRNA synthetases (TyrRSs), we have isolated the gene for the cytoplasmic TyrRS of Saccharomyces cerevisiae by functional complementation in Escherichia coli of a mutant E. coli tRNA. The tRNA, derived from the E. coli initiator tRNA with changes to allow suppression of amber termination codons, is poorly aminoacylated in E. coli and hence, is only a weak amber suppressor. The same tRNA functions as a good suppressor in S. cerevisiae and is aminoacylated with tyrosine by yeast extracts. We **expressed** a yeast cDNA library in an E. coli strain carrying the mutant tRNA gene and several genes with amber mutations. cDNA **clones** were isolated which increased suppression and levels of aminoacylation of the mutant tRNA. Characterization of the gene identified a methionine-initiated open reading frame encoding a protein of 394 amino acids. **Expression** of this protein in E. coli demonstrated that tyrosine was incorporated during suppression and that yeast cytoplasmic TyrRS activity was produced. Yeast cytoplasmic TyrRS has sequences typical of class I aminoacyl-tRNA synthetases, but only weak overall sequence similarity to the corresponding eubacterial and mitochondrial TyrRSs. However, many of the residues known to line the tyrosyl-adenylate-binding pocket of the Bacillus stearothermophilus enzyme can be aligned in the yeast sequence. These include the aspartic acid and tyrosine residues thought to contact the tyrosine side chain to provide substrate specificity.

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=> d his

     (FILE 'HOME' ENTERED AT 10:57:15 ON 12 MAY 2006)

     FILE 'MEDLINE, EMBASE, BIOSIS, BIOTECHDS, SCISEARCH, HCAPLUS, NTIS,
     LIFESCI' ENTERED AT 10:58:39 ON 12 MAY 2006
L1          8037 S TESTIS (2W) SPECIFIC
L2          1048 S TYROSINE (2W) LIGASE?
L3             7 S L1 AND L2
L4             3 DUP REM L3 (4 DUPLICATES REMOVED)
L5       7685185 S CLON? OR EXPRESS? OR RECOMBINANT
L6           221 S L2 AND L5
L7            75 S HUMAN AND L6
L8            45 DUP REM L7 (30 DUPLICATES REMOVED)

=> s "CpG island?"
L9         22846 "CPG ISLAND?"

=> s l2 and l9
L10           12 L2 AND L9

=> dup rem l10
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PROCESSING COMPLETED FOR L10
L11 10 DUP REM L10 (2 DUPLICATES REMOVED)

=> d 1-10 ibib ab

L11 ANSWER 1 OF 10 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 1
ACCESSION NUMBER: 2005:156228 HCAPLUS
Correction of: 2005:16967
DOCUMENT NUMBER: 142:192331
Correction of: 142:108390
TITLE: Quantitative RT-PCR method for the detection in blood of microarray-identified rheumatoid arthritis-related gene transcripts for diagnosing and monitoring disease state
INVENTOR(S): Liew, Choong-Chin
PATENT ASSIGNEE(S): Chondrogene Limited, Can.
SOURCE: U.S. Pat. Appl. Publ., 81 pp., Cont.-in-part of U.S. Ser. No. 802,875.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 29
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005003394	A1	20050106	US 2004-812782	20040330
US 2004014059	A1	20040122	US 2002-268730	20021009
US 2005191637	A1	20050901	US 2004-803737	20040318
US 2005196762	A1	20050908	US 2004-803759	20040318
US 2005196763	A1	20050908	US 2004-803857	20040318
US 2005196764	A1	20050908	US 2004-803858	20040318
US 2005208505	A1	20050922	US 2004-803648	20040318
US 2004265869	A1	20041230	US 2004-812716	20040330
PRIORITY APPLN. INFO.:			US 1999-115125P P	19990106
			US 2000-477148 B1	20000104
			US 2002-268730 A2	20021009
			US 2003-601518 A2	20030620
			US 2004-802875 A2	20040312

AB The present invention is directed to detection and measurement of gene transcripts and their equivalent nucleic acid products in blood for diagnosing and monitoring diseases. The present invention demonstrates that a simple drop of blood may be used to determine the quant. expression of various mRNAs that reflect the health/disease state of the subject through the use of quant. reverse transcription-polymerase chain reaction (QRT-PCR) anal. Specifically provided is anal. performed on a drop of blood for detecting, diagnosing and monitoring rheumatoid arthritis using gene-specific and/or tissue-specific primers. The present invention also describes methods by which delineation of the sequence and/or quantitation of the expression levels of disease-specific genes allows for an immediate and accurate diagnostic/prognostic test for disease or to assess the effect of a particular treatment regimen.

L11 ANSWER 2 OF 10 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:497356 HCAPLUS
DOCUMENT NUMBER: 143:39118
TITLE: Gene expression profiling for diagnosis, prognosis, and therapy of osteoarthritis and other diseases using microarrays
INVENTOR(S): Liew, Choong-chin
PATENT ASSIGNEE(S): Chondrogene Limited, Can.
SOURCE: U.S. Pat. Appl. Publ., 157 pp., Cont.-in-part of U.S. Ser. No. 802,875.
CODEN: USXXCO

DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 29
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005123938	A1	20050609	US 2004-809675	20040325
US 2004037841	A1	20040226	US 2002-85783	20020228
US 2004014059	A1	20040122	US 2002-268730	20021009
US 2005191637	A1	20050901	US 2004-803737	20040318
US 2005196762	A1	20050908	US 2004-803759	20040318
US 2005196763	A1	20050908	US 2004-803857	20040318
US 2005196764	A1	20050908	US 2004-803858	20040318
US 2005208505	A1	20050922	US 2004-803648	20040318
US 2004248169	A1	20041209	US 2004-812737	20040330
AU 2004249318	A1	20041229	AU 2004-249318	20040621
CA 2530191	AA	20041229	CA 2004-2530191	20040621
WO 2004112589	A2	20041229	WO 2004-US20836	20040621
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1643893	A2	20060412	EP 2004-785715	20040621
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR				

PRIORITY APPLN. INFO.:		
US 1999-115125P	P	19990106
US 2000-477148	B1	20000104
US 2001-271955P	P	20010228
US 2001-275017P	P	20010312
US 2001-305340P	P	20010713
US 2002-85783	A2	20020228
US 2002-268730	A2	20021009
US 2003-601518	A2	20030620
US 2004-802875	A2	20040312
US 2004-809675	A	20040325
WO 2004-US20836	W	20040621

AB The present invention relates to gene expression profiling for diagnosis, prognosis and therapy of osteoarthritis and other diseases using microarray methods. Specifically provided is anal. performed on a drop of blood for detecting, diagnosing and monitoring diseases using gene-specific and/or tissue-specific primers. Affymetrix Human Genome U133 and ChondroChip microarrays were used todetect differentially expressed gene transcripts in hypertension, obesity, allergy, systemic steroids, coronary artery disease, diabetes type 2, hyperlipidemia, lung disease, bladder cancer, rheumatoid arthritis, osteoarthritis, liver cancer, schizophrenia, Chagas disease, asthma, and manic depression syndrome. The present invention also describes methods by which delineation of the sequence and/or quantitation of the expression levels of disease-specific genes allows for an immediate and accurate diagnostic/prognostic test for disease or to assess the effect of a particular treatment regimen. [This abstract record is one of 3 records for this document necessitated by the large number of index entries required to fully index the document and publication system constraints.].

L11 ANSWER 3 OF 10 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:325595 HCAPLUS

DOCUMENT NUMBER: 142:353388
TITLE: Gene expression profiles and biomarkers for the detection of Alzheimer's disease-related and other disease-related gene transcripts in blood
INVENTOR(S): Liew, Choong-chin
PATENT ASSIGNEE(S): Chondrogene Ltd., Can.
SOURCE: U.S. Pat. Appl. Publ., 155 pp., Cont.-in-part of U.S. Ser. No. 802,875.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 29
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005079514	A1	20050414	US 2004-812827	20040330
US 2004014059	A1	20040122	US 2002-268730	20021009
US 2005191637	A1	20050901	US 2004-803737	20040318
US 2005196762	A1	20050908	US 2004-803759	20040318
US 2005196763	A1	20050908	US 2004-803857	20040318
US 2005196764	A1	20050908	US 2004-803858	20040318
US 2005208505	A1	20050922	US 2004-803648	20040318
US 2004265869	A1	20041230	US 2004-812716	20040330

PRIORITY APPLN. INFO.:
US 1999-115125P P 19990106
US 2000-477148 B1 20000104
US 2002-268730 A2 20021009
US 2003-601518 A2 20030620
US 2004-802875 A2 20040312

AB The present invention is directed to detection and measurement of gene transcripts and their equivalent nucleic acid products in blood. Specifically provided is anal. performed on a drop of blood for detecting, diagnosing, and monitoring diseases, and in particular Alzheimer's disease, using gene-specific and/or tissue-specific primers. Affymetrix Human Genome U133 and ChondroChip microarrays were used to detect differentially expressed gene transcripts in hypertension, obesity, allergy, systemic steroids, coronary artery disease, diabetes type 2, hyperlipidemia, lung disease, bladder cancer, rheumatoid arthritis, osteoarthritis, liver cancer, schizophrenia, Chagas disease, asthma, and manic depression syndrome. The present invention describes methods by which delineation of the sequence and/or quantitation of the expression levels of disease-specific genes allows for an immediate and accurate diagnostic/prognostic test for disease or to assess the effect of a particular treatment regimen.

L11 ANSWER 4 OF 10 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:160724 HCAPLUS
DOCUMENT NUMBER: 142:259424
TITLE: Gene expression profiles and biomarkers for the detection of asthma-related and other disease-related gene transcripts in blood
INVENTOR(S): Liew, Choong-Chin
PATENT ASSIGNEE(S): Chondrogene Limited, Can.
SOURCE: U.S. Pat. Appl. Publ., 156 pp., Cont.-in-part of U.S. Ser. No. 802,875.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 29
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005042630	A1	20050224	US 2004-816357	20040401

US 2004014059	A1	20040122	US 2002-268730		20021009
US 2005191637	A1	20050901	US 2004-803737		20040318
US 2005196762	A1	20050908	US 2004-803759		20040318
US 2005196763	A1	20050908	US 2004-803857		20040318
US 2005196764	A1	20050908	US 2004-803858		20040318
US 2005208505	A1	20050922	US 2004-803648		20040318
US 2004265869	A1	20041230	US 2004-812716		20040330
PRIORITY APPLN. INFO.:			US 1999-115125P	P	19990106
			US 2000-477148	B1	20000104
			US 2002-268730	A2	20021009
			US 2003-601518	A2	20030620
			US 2004-802875	A2	20040312

AB The present invention is directed to detection and measurement of gene transcripts and their equivalent nucleic acid products in blood. Specifically provided is anal. performed on a drop of blood for detecting, diagnosing, and monitoring diseases, and in particular asthma, using gene-specific and/or tissue-specific primers. Affymetrix Human Genome U133 and ChondroChip microarrays were used to detect differentially expressed gene transcripts in hypertension, obesity, allergy, systemic steroids, coronary artery disease, diabetes type 2, hyperlipidemia, lung disease, bladder cancer, rheumatoid arthritis, osteoarthritis, liver cancer, schizophrenia, Chagas disease, asthma, and manic depression syndrome. The present invention describes methods by which delineation of the sequence and/or quantitation of the expression levels of disease-specific genes allows for an immediate and accurate diagnostic/prognostic test for disease or to assess the effect of a particular treatment regimen. [This abstract record is one of three records for this document necessitated by the large number of index entries required to fully index the docoment and publication system constraints.].

L11 ANSWER 5 OF 10 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 2

ACCESSION NUMBER:	2005:156681 HCAPLUS Correction of: 2005:60757
DOCUMENT NUMBER:	142:216629 Correction of: 142:132329
TITLE:	Gene expression profiles and biomarkers for the detection of hyperlipidemia and other disease-related gene transcripts in blood
INVENTOR(S):	Liew, Choong-Chin
PATENT ASSIGNEE(S):	Chondrogene Limited, Can.
SOURCE:	U.S. Pat. Appl. Publ., 155 pp., Cont.-in-part of U.S. Ser. No. 802,875. CODEN: USXXCO
DOCUMENT TYPE:	Patent
LANGUAGE:	English
FAMILY ACC. NUM. COUNT:	29

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
US 2004248170	A1	20041209	US 2004-812777		20040330
US 2004014059	A1	20040122	US 2002-268730		20021009
US 2005191637	A1	20050901	US 2004-803737		20040318
US 2005196762	A1	20050908	US 2004-803759		20040318
US 2005196763	A1	20050908	US 2004-803857		20040318
US 2005196764	A1	20050908	US 2004-803858		20040318
US 2005208505	A1	20050922	US 2004-803648		20040318
US 2004265869	A1	20041230	US 2004-812716		20040330
PRIORITY APPLN. INFO.:			US 1999-115125P	P	19990106
			US 2000-477148	B1	20000104
			US 2002-268730	A2	20021009
			US 2003-601518	A2	20030620
			US 2004-802875	A2	20040312

AB The present invention is directed to detection and measurement of gene

transcripts and their equivalent nucleic acid products in blood. Specifically provided is anal. performed on a drop of blood for detecting, diagnosing, and monitoring diseases, and in particular hyperlipidemia, using gene-specific and/or tissue-specific primers. Affymetrix Human Genome U133 and ChondroChip microarrays were used to detect differentially expressed gene transcripts in hypertension, obesity, allergy, systemic steroids, coronary artery disease, diabetes type 2, hyperlipidemia, lung disease, bladder cancer, rheumatoid arthritis, osteoarthritis, liver cancer, schizophrenia, Chagas disease, asthma, and manic depression syndrome. The present invention describes methods by which delineation of the sequence and/or quantitation of the expression levels of disease-specific genes allows for an immediate and accurate diagnostic/prognostic test for disease or to assess the effect of a particular treatment regimen.

L11 ANSWER 6 OF 10 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:1997 HCAPLUS
DOCUMENT NUMBER: 142:111841
TITLE: Gene expression profiles and biomarkers for the detection of depression-related and other disease-related gene transcripts in blood
INVENTOR(S): Liew, Choong-Chin
PATENT ASSIGNEE(S): Chondrogene Limited, Can.
SOURCE: U.S. Pat. Appl. Publ., 154 pp., Cont.-in-part of U.S. Ser. No. 802,875.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 29
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004265868	A1	20041230	US 2004-812702	20040330
US 2004014059	A1	20040122	US 2002-268730	20021009
US 2005191637	A1	20050901	US 2004-803737	20040318
US 2005196762	A1	20050908	US 2004-803759	20040318
US 2005196763	A1	20050908	US 2004-803857	20040318
US 2005196764	A1	20050908	US 2004-803858	20040318
US 2005208505	A1	20050922	US 2004-803648	20040318
US 2004265869	A1	20041230	US 2004-812716	20040330
PRIORITY APPLN. INFO.:			US 1999-115125P	P 19990106
			US 2000-477148	B1 20000104
			US 2002-268730	A2 20021009
			US 2003-601518	A2 20030620
			US 2004-802875	A2 20040312

AB The present invention is directed to detection and measurement of gene transcripts and their equivalent nucleic acid products in blood. Specifically provided is anal. performed on a drop of blood for detecting, diagnosing, and monitoring diseases, and in particular mental depression, using gene-specific and/or tissue-specific primers. Affymetrix Human Genome U133 and ChondroChip microarrays were used to detect differentially expressed gene transcripts in hypertension, obesity, allergy, systemic steroids, coronary artery disease, diabetes type 2, hyperlipidemia, lung disease, bladder cancer, rheumatoid arthritis, osteoarthritis, liver cancer, schizophrenia, Chagas disease, asthma, and manic depression syndrome. The present invention describes methods by which delineation of the sequence and/or quantitation of the expression levels of disease-specific genes allows for an immediate and accurate diagnostic/prognostic test for disease or to assess the effect of a particular treatment regimen.

L11 ANSWER 7 OF 10 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:60760 HCAPLUS

Correction of: 2004:1036573
DOCUMENT NUMBER: 142:153477
Correction of: 142:16776
TITLE: Gene expression profiles and biomarkers for the detection of Chagas disease and other disease-related gene transcripts in blood
INVENTOR(S): Liew, Choong-Chin
PATENT ASSIGNEE(S): Chondrogene Limited, Can.
SOURCE: U.S. Pat. Appl. Publ., 154 pp., Cont.-in-part of U.S. Ser. No. 802,875.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 29
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004241729	A1	20041202	US 2004-813097	20040330
US 2004014059	A1	20040122	US 2002-268730	20021009
US 2005191637	A1	20050901	US 2004-803737	20040318
US 2005196762	A1	20050908	US 2004-803759	20040318
US 2005196763	A1	20050908	US 2004-803857	20040318
US 2005196764	A1	20050908	US 2004-803858	20040318
US 2005208505	A1	20050922	US 2004-803648	20040318
US 2004265869	A1	20041230	US 2004-812716	20040330
PRIORITY APPLN. INFO.:			US 1999-115125P	P 19990106
			US 2000-477148	B1 20000104
			US 2002-268730	A2 20021009
			US 2003-601518	A2 20030620
			US 2004-802875	A2 20040312

AB The present invention is directed to detection and measurement of gene transcripts and their equivalent nucleic acid products in blood. Specifically provided is anal. performed on a drop of blood for detecting, diagnosing, and monitoring diseases, and in particular Chagas disease, using gene-specific and/or tissue-specific primers. Affymetrix Human Genome U133 and ChondroChip microarrays were used to detect differentially expressed gene transcripts in hypertension, obesity, allergy, systemic steroids, coronary artery disease, diabetes type 2, hyperlipidemia, lung disease, bladder cancer, rheumatoid arthritis, osteoarthritis, liver cancer, schizophrenia, Chagas disease, asthma, and manic depression syndrome. The present invention describes methods by which delineation of the sequence and/or quantitation of the expression levels of disease-specific genes allows for an immediate and accurate diagnostic/prognostic test for disease or to assess the effect of a particular treatment regimen. [This abstract record is one of 3 records for this document necessitated by the large number of index entries required to fully index the document and publication system constraints.].

L11 ANSWER 8 OF 10 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:60759 HCAPLUS
Correction of: 2004:1036572
DOCUMENT NUMBER: 142:111840
Correction of: 142:16824
TITLE: Gene expression profiles and biomarkers for the detection of lung disease-related and other disease-related gene transcripts in blood
INVENTOR(S): Liew, Choong-Chin
PATENT ASSIGNEE(S): Chondrogene Limited, Can.
SOURCE: U.S. Pat. Appl. Publ., 155 pp., Cont.-in-part of U.S. Ser. No. 802,875.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 29
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
US 2004241728	A1	20041202	US 2004-812764		20040330
US 2004014059	A1	20040122	US 2002-268730		20021009
US 2005191637	A1	20050901	US 2004-803737		20040318
US 2005196762	A1	20050908	US 2004-803759		20040318
US 2005196763	A1	20050908	US 2004-803857		20040318
US 2005196764	A1	20050908	US 2004-803858		20040318
US 2005208505	A1	20050922	US 2004-803648		20040318
US 2004265869	A1	20041230	US 2004-812716		20040330
PRIORITY APPLN. INFO.:			US 1999-115125P	P	19990106
			US 2000-477148	B1	20000104
			US 2002-268730	A2	20021009
			US 2003-601518	A2	20030620
			US 2004-802875	A2	20040312

AB The present invention is directed to detection and measurement of gene transcripts and their equivalent nucleic acid products in blood. Specifically provided is anal. performed on a drop of blood for detecting, diagnosing and monitoring diseases using gene-specific and/or tissue-specific primers. Affymetrix Human Genome U133 and ChondroChip microarrays were used to detect differentially expressed gene transcripts in hypertension, obesity, allergy, systemic steroids, coronary artery disease, diabetes type 2, hyperlipidemia, lung disease, bladder cancer, rheumatoid arthritis, osteoarthritis, liver cancer, schizophrenia, Chagas disease, asthma, and manic depression syndrome. The present invention also describes methods by which delineation of the sequence and/or quantitation of the expression levels of disease-specific genes allows for an immediate and accurate diagnostic/prognostic test for disease or to assess the effect of a particular treatment regimen.

L11 ANSWER 9 OF 10 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:60754 HCAPLUS
Correction of: 2004:1036571
DOCUMENT NUMBER: 142:233342
Correction of: 142:16836
TITLE: Sequences of human schizophrenia related genes and use for diagnosis, prognosis and therapy
INVENTOR(S): Liew, Choong-Chin
PATENT ASSIGNEE(S): Chondrogene Limited, Can.
SOURCE: U.S. Pat. Appl. Publ., 156 pp., Cont.-in-part of U.S. Ser. No. 802,875.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 29
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
US 2004241727	A1	20041202	US 2004-812731		20040330
US 2004014059	A1	20040122	US 2002-268730		20021009
US 2005191637	A1	20050901	US 2004-803737		20040318
US 2005196762	A1	20050908	US 2004-803759		20040318
US 2005196763	A1	20050908	US 2004-803857		20040318
US 2005196764	A1	20050908	US 2004-803858		20040318
US 2005208505	A1	20050922	US 2004-803648		20040318
US 2004265869	A1	20041230	US 2004-812716		20040330
US 2005208519	A1	20050922	US 2004-989191		20041115
PRIORITY APPLN. INFO.:			US 1999-115125P	P	19990106
			US 2000-477148	B1	20000104
			US 2002-268730	A2	20021009

	US 2003-601518	A2 20030620
	US 2004-802875	A2 20040312
	US 2004-812731	A2 20040330
	WO 2004-US20836	A2 20040621

AB The present invention is directed to detection and measurement of gene transcripts and their equivalent nucleic acid products in blood. Specifically provided is anal. performed on a drop of blood for detecting, diagnosing and monitoring diseases using gene-specific and/or tissue-specific primers. The present invention also describes methods by which delineation of the sequence and/or quantitation of the expression levels of disease-specific genes allows for an immediate and accurate diagnostic/prognostic test for disease or to assess the effect of a particular treatment regimen. [This abstract record is one of 3 records for this document necessitated by the large number of index entries required to fully index the document and publication system constraints.].

L11 ANSWER 10 OF 10 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER:	2005:60755 HCAPLUS Correction of: 2004:1036570
DOCUMENT NUMBER:	142:154259 Correction of: 142:36938
TITLE:	Analysis of genetic information contained in peripheral blood for diagnosis, prognosis and monitoring treatment of allergy, infection and genetic disease in human
INVENTOR(S):	Liew, Choong-Chin
PATENT ASSIGNEE(S):	Chondrogene Limited, Can.
SOURCE:	U.S. Pat. Appl. Publ., 155 pp., Cont.-in-part of U.S. Ser. No. 802,875. CODEN: USXXCO
DOCUMENT TYPE:	Patent
LANGUAGE:	English
FAMILY ACC. NUM. COUNT:	29

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004241726	A1	20041202	US 2004-812707	20040330
US 2004014059	A1	20040122	US 2002-268730	20021009
US 2005191637	A1	20050901	US 2004-803737	20040318
US 2005196762	A1	20050908	US 2004-803759	20040318
US 2005196763	A1	20050908	US 2004-803857	20040318
US 2005196764	A1	20050908	US 2004-803858	20040318
US 2005208505	A1	20050922	US 2004-803648	20040318
US 2004265869	A1	20041230	US 2004-812716	20040330

PRIORITY APPLN. INFO.:	US 1999-115125P	P 19990106
	US 2000-477148	B1 20000104
	US 2002-268730	A2 20021009
	US 2003-601518	A2 20030620
	US 2004-802875	A2 20040312

AB The present invention is directed to detection and measurement of gene transcripts and their equivalent nucleic acid products in blood. Specifically provided is anal. performed on a drop of blood for detecting, diagnosing, and monitoring diseases, and in particular allergy, using gene-specific and/or tissue-specific primers. Affymetrix Human Genome U133 and ChondroChip microarrays were used to detect differentially expressed gene transcripts in hypertension, obesity, allergy, systemic steroids, coronary artery disease, diabetes type 2, hyperlipidemia, lung disease, bladder cancer, rheumatoid arthritis, osteoarthritis, liver cancer, schizophrenia, Chagas disease, asthma, and manic depression syndrome. The present invention describes methods by which delineation of the sequence and/or quantitation of the expression levels of disease-specific genes allows for an immediate and accurate diagnostic/prognostic test for disease or to assess the effect of a particular treatment regimen. [This abstract record

is one of 3 records for this document necessitated by the large number of index entries required to fully index the document and publication system constraints.].

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E8            3     FEDER JEAN MARC/AU
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              JR"/AU)

=> d his

     (FILE 'HOME' ENTERED AT 10:57:15 ON 12 MAY 2006)

     FILE 'MEDLINE, EMBASE, BIOSIS, BIOTECHDS, SCISEARCH, HCAPLUS, NTIS,
     LIFESCI' ENTERED AT 10:58:39 ON 12 MAY 2006
L1         8037 S TESTIS (2W) SPECIFIC
L2         1048 S TYROSINE (2W) LIGASE?
L3            7 S L1 AND L2
L4            3 DUP REM L3 (4 DUPLICATES REMOVED)
L5      7685185 S CLON? OR EXPRESS? OR RECOMBINANT
L6          221 S L2 AND L5
L7           75 S HUMAN AND L6
L8           45 DUP REM L7 (30 DUPLICATES REMOVED)
L9        22846 S "CPG ISLAND?"
L10          12 S L2 AND L9
L11          10 DUP REM L10 (2 DUPLICATES REMOVED)
                E FEDER J N/AU
L12         187 S E3
                E NELSON T C/AU
L13         130 S E3
                E WU S/AU
L14        3643 S E3
                E KRYSTEK S R/AU
L15         204 S E3-E12

=> s l12 or l13 or l14 or l15
L16       4127 L12 OR L13 OR L14 OR L15

=> s l2 and l16
L17          2 L2 AND L16

=> d 1-2 ibib ab

L17   ANSWER 1 OF 2  BIOTECHDS COPYRIGHT 2006 THE THOMSON CORP. on STN
ACCESSION NUMBER: 2004-07314  BIOTECHDS
TITLE:            New testis-specific tubulin tyrosine-ligase
                  -like BGS-42 polypeptide, useful for preventing, treating or
                  ameliorating a medical condition, e.g. aberrant cellular
                  proliferation, reproductive disorders or testicular disorders
      ;
                     involving vector-mediated gene transfer, expression in
                     host cell for use in gene therapy
AUTHOR:           FEDER J N; WU S; NELSON T C
PATENT ASSIGNEE:  BRISTOL-MYERS SQUIBB CO
PATENT INFO:      WO 2004005487 15 Jan 2004
APPLICATION INFO: WO 2003-US21605 9 Jul 2003
PRIORITY INFO:    US 2002-394725 9 Jul 2002; US 2002-394725 9 Jul 2002
DOCUMENT TYPE:    Patent
LANGUAGE:         English
OTHER SOURCE:     WPI: 2004-099381 [10]
```

AB DERWENT ABSTRACT:
NOVELTY - A testis-specific tubulin **tyrosine-ligase** -like polypeptide, designated BGS-42 polypeptide, is new.

DETAILED DESCRIPTION - A testis-specific tubulin **tyrosine-ligase**-like polypeptide, designated BGS-42 polypeptide comprises or consists of:(a) a polypeptide fragment, domain, epitope or the full-length protein of a fully defined sequence of 541 amino acids (I), as given in the specification, or the encoded sequence included in ATCC Deposit Number PTA-4454, having **tyrosine** tubulin **ligase** activity; (b) a polypeptide comprising amino acids 2-541 of the sequence of (I), where the amino acids 2-541 comprises a polypeptide of (I) minus the start methionine; (c) a polypeptide comprising amino acids 1-541 or 73-365 of the sequence of (I); or (d) a polypeptide comprising at least 424 contiguous amino acids of the sequence of (I). INDEPENDENT CLAIMS are also included for: (1) an isolated nucleic acid molecule comprising or consisting of: (a) a polynucleotide fragment of 1838 bp (II), fully defined in the specification, or a polynucleotide fragment of the cDNA sequence included in ATCC Deposit Number PTA-4454, which is hybridizable to the sequence of (II); (b) a polynucleotide encoding a polypeptide fragment, domain, epitope or the full-length protein of the sequence of (I), or a polypeptide fragment, domain or epitope encoded by the cDNA sequence included in ATCC Deposit Number PTA-4454, which is hybridizable to the sequence of (II), having **tyrosine** tubulin **ligase** activity; (c) a polynucleotide which is a variant or an allelic variant of (II); (d) nucleotides 156-1775 of the sequence of (II), where the nucleotides encode a polypeptide corresponding to amino acids 2-541 of (I) minus the start methionine; (e) nucleotides 153-1775 of the sequence of (II), where the nucleotides encode a polypeptide corresponding to amino acids 1-541 of (I) including the start codon; (f) nucleotides 369-1247 of the sequence of (II), where the nucleotides encode a polypeptide corresponding to amino acids 73-365 of (I); (g) a polynucleotide that encodes at least 424 contiguous amino acids of (I); (h) at least 1272 contiguous nucleotides of (II); (i) a polynucleotide which represents the complementary sequence (antisense) of (II); (j) a polynucleotide capable of hybridizing under stringent conditions to any one of the polynucleotides above, where the polynucleotide does not hybridize under stringent conditions to a nucleic acid molecule having a nucleotide sequence of only A or only T residues; (k) a polynucleotide comprising or consisting of the BGS-42 gene or BGS-42 promoter; or (l) a nucleotide sequence of 2241 bp, fully defined in the specification; (2) a recombinant vector comprising the isolated nucleic acid molecule; (3) an isolated antibody that binds specifically to BGS-42 polypeptide; (4) a recombinant host cell comprising the vector sequences, or expressing the BGS-42 polypeptide; (5) making an isolated polypeptide; (6) preventing, treating or ameliorating a medical condition; and (7) diagnosing a pathological condition or a susceptibility to a pathological condition in a subject.

WIDER DISCLOSURE - Also disclosed are screening methods for identifying agonists and antagonists of the polynucleotides and polypeptides, and methods of controlling the expression of the polypeptide.

BIOTECHNOLOGY - Preparation (claimed): The BGS-42 polypeptide is prepared by standard recombinant methods. Making an isolated polypeptide comprises culturing the recombinant host cell under conditions such that the polypeptide is expressed, and recovering the polypeptide. Preferred Polypeptide: The full-length protein comprises sequential amino acid deletions from the C-terminus or the N-terminus. Preferred Nucleic Acid: The polynucleotide fragment consists of a nucleotide sequence encoding a human **tyrosine** tubulin **ligase**. Preferred Method:
Preventing, treating or ameliorating a medical condition comprises administering to a mammalian subject a therapeutic amount of the BGS-42 polypeptide or its modulator. Diagnosing a pathological condition or a susceptibility to a pathological condition in a subject comprises determining the presence or absence of a mutation in the polynucleotide

cited above, and diagnosing a pathological condition or a susceptibility to a pathological condition based on the presence or absence of the mutation. Alternatively, the method comprises determining the presence or amount of expression of the BGS-42 polypeptide in a **tyrosine** tubulin **ligase** sample, and diagnosing a pathological condition or a susceptibility to a pathological condition based on the presence or amount of expression of the polypeptide.

ACTIVITY - Cytostatic; Respiratory-Gen.; Gastrointestinal-Gen.; Neuroprotective; Endocrine-Gen.; Antiinflammatory; Anabolic; Hypertensive; Osteopathic; Nootropic; Antiparkinsonian; Antiarthritic; Antiasthmatic; Anti-HIV; Antibacterial; Immunosuppressive; Antiseborrheic; Dermatological. No biological data given.

MECHANISM OF ACTION - **Tyrosine Ligase** Modulator; Gene Therapy. No biological data given.

USE - The BGS-42 polypeptide or polynucleotide can be used for diagnosing a pathological condition or a susceptibility to a pathological condition in a subject, and for preventing, treating or ameliorating a medical condition, such as a disorder related to aberrant tubulin ligase activity, a disorder related to aberrant tubulin-carboxypeptidase activity, aberrant cellular proliferation, reproductive disorders, testicular disorders, testicular cancer, pulmonary disorders, lung cancer, gastrointestinal disorders, colon cancer, stomach cancer, neural disorders, brain cancer, liver cancer, or proliferative condition of the testis, lung, small intestine, brain or lymph tissue (all claimed). The BGS-42 polypeptide, polynucleotide, or their modulators are also useful for treating infertility, Cushing's syndrome, emphysema, pneumonia, Addison's disease, acromegaly, Alzheimer's disease, or Parkinson's disease. The BGS-42 polypeptide can be used as a preventive agent for immunological disorders including arthritis, asthma, AIDS, sepsis, acne, Sjogren's disease or scleroderma. The antibodies may be used to purify, detect and target the BGS-42 polypeptides.

ADMINISTRATION - Administration of the antibody is 0.1-100 (preferably 1-10) mg/kg, intradermally, intramuscularly, intraperitoneally, intravenously, subcutaneously, intranasally, epidurally, intraventricularly, intrathecally, topically, orally, or rectally.

EXAMPLE - A polynucleotide encoding a BGS-42 polypeptide was amplified using PCR oligonucleotide primers corresponding to the 5' and 3' ends of the DNA sequence to synthesize insertion fragments. The pQE-9 vector was digested with BamHI and XbaI and the amplified fragment was ligated into the pQE-9 vector maintaining the reading frame initiated at the bacterial ribosome-binding site. The ligation mixture was used to transform Escherichia coli strain M15/rep4. Transformants were identified by their ability to grow on LB (Luria bertani) plates, and ampicillin/kanamycin-resistant colonies were selected. Clones containing the desired constructs were grown overnight in liquid culture, i.e. LB media, supplemented with both ampicillin and kanamycin. Isopropyl-B-D-thiogalacto pyranoside (IPTG) was added to induce gene expression. Cells were grown for an extra 3-4 hours, and cells were harvested by centrifugation. The cell pellet obtained by centrifugation was solubilized, and the solubilized BGS-42 protein was purified using a metal chelating column under conditions that allow tight binding of the protein. (343 pages)

L17 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:722839 HCAPLUS

DOCUMENT NUMBER: 141:238811

TITLE: Protein and cDNA sequences of a novel human testis-specific tubulin **tyrosine** **ligase** like protein BGS-42, and diagnostic and therapeutic use

INVENTOR(S): Feder, John N.; Nelson, Thomas C.; Wu, Shujian; **Krystek, Stanley R.**

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 199 pp., Cont.-in-part of U.S. Ser. No. 615,659.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
US 2004171131	A1	20040902	US 2003-635977		20030807
US 2004157234	A1	20040812	US 2003-615659		20030709
PRIORITY APPLN. INFO.:			US 2002-394725P	P	20020709
			US 2003-615659	A2	20030709

AB The present invention provides novel polynucleotides encoding BGS-42 polypeptides, fragments and homologues thereof Also provided are vectors, host cells, antibodies, and recombinant and synthetic methods for producing said polypeptides. The invention further relates to diagnostic and therapeutic methods for applying these novel BGS-42 polypeptides to the diagnosis, treatment, and/or prevention of various diseases and/or disorders related to these polypeptides. The invention further relates to screening methods for identifying agonists and antagonists of the polynucleotides and polypeptides of the present invention.

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(FILE 'HOME' ENTERED AT 10:57:15 ON 12 MAY 2006)

FILE 'MEDLINE, EMBASE, BIOSIS, BIOTECHDS, SCISEARCH, HCAPLUS, NTIS, LIFESCI' ENTERED AT 10:58:39 ON 12 MAY 2006

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L2          1048 S TYROSINE (2W) LIGASE?
L3             7 S L1 AND L2
L4             3 DUP REM L3 (4 DUPLICATES REMOVED)
L5       7685185 S CLON? OR EXPRESS? OR RECOMBINANT
L6           221 S L2 AND L5
L7            75 S HUMAN AND L6
L8            45 DUP REM L7 (30 DUPLICATES REMOVED)
L9         22846 S "CPG ISLAND?"
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L15          204 S E3-E12
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	Issue Date	Pages	Document ID	Title
1	20060209	162	US 20060029945 A1	Novel full length cDNA
2	20040902	199	US 20040171131 A1	Polynucleotides encoding a novel testis-specific tubulin tyrosine-ligase-like protein, BGS42
3	20040812	171	US 20040157234 A1	Polynucleotides encoding a novel testis-specific tubulin tyrosine-ligase-like protein, BGS42
4	20040108	165	US 20040005560 A1	Novel full-length cDNA
5	20050913	138	US 6943241 B2	Full-length cDNA

	Issue Date	Pages	Document ID	Title
1	20060406	500	US 20060074565 A1	Methods, systems, and compositions for classification, prognosis, and diagnosis of cancers
2	20060209	162	US 20060029945 A1	Novel full length cDNA
3	20040902	199	US 20040171131 A1	Polynucleotides encoding a novel testis-specific tubulin tyrosine-ligase-like protein, BGS42
4	20040812	171	US 20040157234 A1	Polynucleotides encoding a novel testis-specific tubulin tyrosine-ligase-like protein, BGS42
5	20040108	165	US 20040005560 A1	Novel full-length cDNA
6	20031211	206	US 20030228570 A1	Methods of diagnosis of Hepatitis C infection, compositions and methods of screening for modulators of Hepatitis C infection
7	20050913	138	US 6943241 B2	Full-length cDNA
8	20040831	93	US 6783969 B1	Cathepsin V-like polypeptides

	Issue Date	Pages	Document ID	Title
1	20060316	40	US 20060057066 A1	Reagent sets and gene signatures for renal tubule injury
2	20040902	199	US 20040171131 A1	Polynucleotides encoding a novel testis-specific tubulin tyrosine-ligase-like protein, BGS42
3	20040812	171	US 20040157234 A1	Polynucleotides encoding a novel testis-specific tubulin tyrosine-ligase-like protein, BGS42
4	20040701	105	US 20040126762 A1	Novel compositions and methods in cancer
5	20040122	250	US 20040014053 A1	Novel proteins and nucleic acids encoding same
6	20031211	206	US 20030228570 A1	Methods of diagnosis of Hepatitis C infection, compositions and methods of screening for modulators of Hepatitis C infection
7	20030320	196	US 20030054421 A1	Nucleic acids, proteins, and antibodies
8	20040831	93	US 6783969 B1	Cathepsin V-like polypeptides

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1	L1	642	testis adj specific
2	L2	18	tyrosine adj ligase$2
3	L3	5	l1 same l2
4	L4	841303	clon$3 or express$3 or recombinant
5	L5	8	l2 same l4
6	L6	0	"CPG island$2"
7	L7	173938	FEDER NELSON WU KRYSTEK
8	L8	8	l2 and l7